PREPARING FOR RAIN MAN: POLICE, TRAINING AND AUTISM

by

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Fairfax, VA

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DEDICATION

This is dedicated to my brothers, Cooper and Frankie, who without them this thesis probably wouldn’t exist. Without their presence in my life, I would be a lesser person.

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I would like to thank all of my committee members, particularly Dr. Redlich, for patiently putting up with my insanity. To my mother, father and grandparents: thank you for supporting my pursuit of higher education. To Hannah and Meghan, your support and friendship have been invaluable. A special thank you to my friends and roommates, Heather and Erin, for not smothering me in my sleep while I finished this thesis.

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LIST OF ABBREVIATIONS

Pervasive Developmental Disorders.....PDD
Developmental Disorders.....DD
Autism Spectrum Disorder .....ASD
People with Mental Illness..... PMI

ABSTRACT

PREPARING FOR RAIN MAN: POLICE, TRAINING AND AUTISM

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The CDC estimates that the prevalence of children diagnosed with an autism spectrum disorder is 1 out of 68 in the United States. As the number of autism diagnoses rises along with the distinct lack of mental health resources, law enforcement have become the first line of contact for either individuals with autism or those close to them. Law enforcement have been thrust into the dual role of police officer and mental health provider. The range of severity of autism presents a unique challenge when training officers as it is difficult to provide thorough tools and skills while encompassing all of the situations they may encounter; in particular, the ability to communicate with and de-escalate individuals with autism who are high and low functioning. This thesis presents an analysis of training material provided to police on autism with a specific focus on communication and de-escalation. The analysis suggests that law enforcement needs more training on autism and how to communicate with individuals with autism to ensure both officer and citizen safety.

INTRODUCTION

Of all annual police encounters (offender, victim, witness, etc.), 7-10% involve people who have a mental illness (PMI) (Hails & Borum, 2003). Though not considered a mental illness in the clinical literature, people who have a developmental disability (PDD) are four to seven times more likely to become a victim of crime than those who have none (Sobsey, Wells, Lucardie, & Mansell, 1995). According to Curry, Posluszny, & Kraska (1993), PDD are also seven times more likely to attract the attention of police because of their diagnoses. At least as far back as the 1960s, researchers have evaluated how the manner in which police manage PMIs and PDDs in the community as a part of their daily work (Bittner, 1967; Teplin & Pruett, 1992). And although much of the research has focused on policing and PMIs, there has not been the same level of evaluation on developmental disorders, particularly autism spectrum disorders (ASD). However, developmental disorders are highly prevalent in the community; the CDC estimates that 1 in 6 children were diagnosed between the years 2006-2008, a rate increased by 17.1% compared to the previous decade (Boyle et al., 2011).

A contemporary term used in some policing literature is ‘street corner psychiatrist’ (Teplin & Pruett, 1992). The term refers to the role police have found themselves since the closings of mental health institutions. Since de-institutionalization, police are now often the first responders to persons with mental illness experiencing a

crisis, in essence having to act as a mental health expert on their beats when a situations arise (Lamb, Weinberger, & DeCuir Jr, 2002). One reason for the police's increased role in acting as a 'streetcorner psychiatrist' (Teplin & Pruett, 1992) is that there are fewer non-traditional criminal justice options of 'treatment' (e.g., deinstitutionalization, stricter commitment requirements, etc.). The lack of treatment options is even starker for those from a lower socioeconomic status (Teplin & Pruett, 1992). Due to this reduction in private or public health options, when persons with mental illness are in a crisis situation due to their diagnosis, concerned family, friends or even neighbors call the police as it is may be the only care option left. Police, however, are not social workers or mental health professionals. In other words, "the number[s] of mentally ill persons involved with police have increased while, at the same time, the police officer's dispositional options have decreased" (Teplin & Pruett, pg. 139). Police officers therefore must function as 'streetcorner psychiatrists' with their own discretion as many of the PMIs and PDDs they encounter cannot be diverted to mental health services. Additionally, the social expectations of the roles of police officers and their services has changed over time, and this extends to their roles interacting with PMIs and PDDs (Modell & Cropp, 2007). In addition, other actors within the criminal justice system have voiced concerns that their own agencies (i.e. prosecutor, judicial, child welfare, corrections) may not be able to effectively provide proper services to PDDs (Berryessa, 2016).

With this increase in discretionary power given to police, according to Bittner (1967), legal procedures have not outlined precisely how police should respond to mental health situations. Training becomes necessary, then, to inform police as to the best-

practice responses to certain situations. This training needs to not only address what the empirical social science argues is the best response for achieving a desired outcome (i.e., evidence-based practices), but also to combat the shared, informal operative code often present in police departments in terms of "how things 'should' be done" (Bittner, 1967, pg. 140).

The purpose of this thesis is to conduct an exploratory content analysis on a subsample of police training material with a specific focus on autism. . This thesis seeks to answer three questions. First, to what extent are police trained on autism spectrum disorders, such as specific characteristics like stimming[1] (Edelson, "Self-Stimulatory") and how do these influence effective communication? Second, what is the content of this training? And how does it compare to the training provided on personality or mood disorders? Third, in the state/government published manuals or CIT manuals, are police taught communication and de-escalation techniques specific to autism spectrum disorders? Below, I first provide a basic and general overview of the diagnostic characteristics of autism as well as a review of the current literature on policing and autism. Then, I review the methodological design of the thesis study along with the results of the study. Finally, I discuss the results and their implications and limitations, and draw conclusions for future research.

[1] Stimming is repetitive behaviors or movements prevalent in those with developmental disoders (particularly ASD) that serves as a method for individuals with the disorder to self-regulate and calm themselves.

The Issue

Since de-institutionalization, police are now the first line of contact with PMIs (Person with a Mental Illness) and PDDs (Person with a Developmental Disorder) in a crisis situation rather than a trained mental health worker. Therefore, in addition to their normal function as a law enforcement officer and all responsibilities that job entails, police now are expected to fulfill a caring, pseudo-healthcare role. This additional role is the epitome of the "streetcorner psychiatrist" (Teplin & Pruett, 1992). Are police provided enough training on the vulnerable populations they will interact with? Does the content of the training ensure they can connect with all the various types of individuals? Some studies have published results which indicate the answer to these questions is "no." For instance in one survey 35% of officers, when asked to list characteristics of autism, simply answered 'Rain Man' (Modell & Mak, 2008). While the character of Rain Man does exhibit characteristics of a high functioning individual on the spectrum (i.e. issues with social interaction, eye contact, etc.) this archetype excludes characteristics of those who are low functioning such as being non-verbal. Until legislation or the private sector provide services to fulfill this need, police will continue to function in this dual role of enforcement and care as there are a lack of treatment options that are not based in the criminal justice system (e.g., jail). There is a lack of literature as to whether police are given proper guidance on how to use their discretion in these situations, which is a guiding motivation behind this study.

Autism Spectrum Disorders

As of 2016, the Center for Disease and Control reports that in the United States 1 in 68 children will be diagnosed with an Autism Spectrum Disorder (ASD) (Christensen

et al., 2016) and 25% of those diagnosed will be non-verbal (Baio, 2014; Philip et al., 2012). The DSM-V defines the spectrum as "persistent deficits in social communication and social interaction" and discusses that not all people have the same level of severity which depends on the impairment in communication and repetitive behaviors. In addition, a person can be diagnosed with an ASD but may or may not have a co-occurring intellectual impairment or language impairment. For instance, an individual with Asperger's disorder suffers from social and communication issues but has no language impairment where as someone with traditional autism will struggle with both language and social interactions. ASD is a lifelong diagnosis with no current cure. The full DSM-V diagnostic criteria can be found in the Appendix section.

It is important to understand that the manifestations of the autism disorder are unique and vary from individual to individual. There is a saying in the autism community which is 'if you know one person with autism, you know *one* person with autism'. The meaning behind this statement is that no two people with autism are alike, even if they are placed similarly on the functioning spectrum. For example, two boys with autism who are non-verbal or have extremely limited speech might both be placed on the 'low functioning' end of the spectrum. However, one boy is extremely tactile sensitive and does not like to be touched at all, whereas the second boy is not as sensitive to tactile stimuli and freely gives hugs. Though both are considered low functioning autistic, the displays of the disorders' characteristics are different. The understanding of how broadly ASD can manifest in each individual is very important for police officers, as the increasing prevalence rate indicates that they will interact more and more with

individuals on the spectrum. ASD affects all races, ethnicities and socioeconomic groups across the country (CDC, 2016).

The behavior of police is important for interactions involving someone with an ASD. Those with a mental health diagnosis often perceive that their diagnosis as a stigma and that law enforcement will stereotype them as violent, unable to understand the situation and incapable of acting autonomously (e.g., making decisions on their own behalf, etc.) (Butler, 2014). For instance, many persons with ASDs have a sensory sensitivity to light and sound. If an officer's patrol vehicle has the lights and sirens on, this may cause someone with ASD to become physically resistive because of the sensory overload. If this officer has limited information on risk and de-escalation techniques, the person with an ASD, who is already be agitated, may become even more so with the loud siren noises and flashing lights (Debbaudt & Legacy, 2004). Many persons with an ASD, in order to self-regulate, will move away from the location where the stimulus affects them. An officer may reasonably assume – without any other information or risk and de-escalation training – that this person is attempting to flee the scene and respond as if the behavior is intended as aggressive, therefore reacting to the person with an ASD as if s/he is a "dangerous felon" (Ruiz & Miller, 2004). If an officer recognizes the true reason for the behavior, this can reduce the risk of use of force or injuries to both the officer and citizen (Teplin, 2000).

LITERATURE REVIEW

Overall there is little research that specifically studies the content of training police receive and ASD, however there has been a wide breadth of studies in areas of interest that intersect with the topic of this thesis.

Police Perceptions and Autism Spectrum Disorders

There is little research evaluating training material or programs that are specifically designed to educate law enforcement on ASD, aside from general Crisis Intervention Training (which will be discussed later). Most of the research focuses on police experience with PDDs or ASDs: the rate and nature of contact, satisfaction with their current training or effectiveness of whatever training they have received. For instance, Chown (2010) found that 40% of surveyed officers did not understand the term 'developmental disability' compared to 'cognitive disability' and 'mental disorder'. Due to the lack of studies on the actual training material, most of the research has focused on police experiences and their perceptions. Therefore, this section will cover the existing literature that studies police perceptions of persons with ASDs and quality of the training they have received.

Crane et al. (2016) created three online surveys for their British sample: one for police, one for adults with ASD and one for parents who have a child with ASD. Respondents were recruited through advertisements on social networking sites as well as

snowball sampling through researcher contacts within police. The results from the police survey indicated that 42% of the officers felt that they had handled their interactions with persons with ASD in a manner that was satisfactory based on their department and training standards.. However they also indicated that even though they had received training, officers desired more targeted training (Crane et al., 2016). For example, detectives' training would focus on how to question person with ASD that would be more detailed, such as establishing the timeline of someone's movements without using leading questions. A uniformed officer's training, in contrast, may focus on asking questions of persons with ASD related to gathering information about whether they are lost or injured. Contradicting the results from the law enforcement survey, parents of a child with ASD and adult with ASDs in the community were mostly dissatisfied with their contact with police (Crane et al., 2016). However the latter results may be due to the method of recruitment. The nature of participant recruitment may have selected more participants who wanted to prove a point (i.e. those dissatisfied with police contact may have more motivation to take the survey than those who were not dissatisfied).

Henshaw and Thomas (2012) surveyed Australian police officers during a two-day required firearms training session on their knowledge and experience with the citzens with an intellectual disability. Officers reported a high prevalence rate of encountering people with an intellectual disability. When asked about their training, officers were most likely to rely on previous experiences from their job as a source of knowledge when they encountered an intellectual disability citizen. Henshaw and Thomas (2012) identified the largest challenges officers faced as communication and gaining access and/or cooperation

from other service providers who interact with the intellectual disability citizen. This second finding concurs with Teplin and Pruett's (1992) conclusions from more than two decades ago that a large obstacle officers face as 'streetcorner psychiatrists' is the lack of resources from mental health and provider services.

Modell and Cropp (2007) contrasted the different perceptions police officers have toward those with a mental disability (ASD, mental retardation) and those with a mental illness (particularly schizophrenia). The researchers found that officers' past experiences with PMIs increased their initial wariness and that this stigma extended to individuals with a mental disability – despite the very large diagnostic and clinical difference between schizophrenia and autism, for example. Modell and Cropp (2007) determined three barriers that "effective training" (pg. 63) must address in order to properly train law enforcement to interact with these special populations. The first was *resistance to change*: some officers may believe that a certain demographic is related to a specific aspect of crime and may not feel that training combating this attitude is 'correct'. The second was the *warrior mindset*: officers may feel that their job is a warzone and therefore violence is necessary. The authors (Modell & Cropp, 2007) suggest mitigating this mindset with a social service mindset. That is, that the training should address the fact that as the first contact with the justice system, police officers also serve as a sort of human resource tool for people they encounter, rather than just functioning as a punitive force. This type of social service mindset would include training like empathetic listening, so that officers can learn how to communicate with individuals in crisis in order to best help them rather than just viewing the situation as something to be overcome in

that moment. The third barrier was *social isolation*: the nature of the law enforcement job may result in officers feeling 'outside' of society (long hours, shift changes, cynicism, etc.). This isolation can limit the officer's positive social interactions outside of the job, exacerbating the stress of their encounters during work. Modell and Cropp's (2007) study not only identified how officers' perceptions of PMIs can spill over to ASDs, but also how to potentially design effective training courses to combat the barriers that maintain these stigmas.

In a similar study Modell and Mak (2008) studied police officers' perceptions of disabilities but also extended the questionnaire to determine self-perceived competence responding to incidents involving PDDs. Of the 124 participants, only 20% of the officers were able to identify autism as a social and/or communication deficit. Eighty percent were not able to accurately identify accurate characteristics of ASD, and more than 35% simply listed 'Rain Man' as their response. This latter finding from the study illustrates a glaring gap of understanding among law enforcement in the ability to recognize the individual severity of the disorder. This is not to say that officers are expected to be as educated as social welfare practitioners. However being able to identify the striking differences in severity rather than the nuanced gradients is an extremely useful skill for officers to know. Understanding that people with ASD have social and/or communication deficits can become quite important when law enforcement interact with this population. For instance, it is estimated that 25% of children diagnosed with ASD will never develop verbal language skills (Baio, 2014; Philip, Dauvermann, Whalley, Baynham, Lawrie, &

Stanfield, 2012), which stands as a direct conflict to the archetypal autistic individual portrayed in "Rain Man."

In the same study, when asked to self-report on their training, 48% of participants indicated that they had received no training on disabilities, while another 48% rated the training they had received as 'minimal' and 'vague' (Modell & Mak, 2008). The participating officers were also asked what special skills/knowledge should be provided to them in order to interact with PDDs. From their responses, four themes were found: 1. Training that involved the identification of symptoms and knowledge of the basic characteristics and behavioral cues of PDDs, 2. Patience as a skill, 3. Available resources and referral systems in their area, and 4. Communication skills. Officers particularly gave a lot of thought to the last theme, indicating that they have a genuine desire to learn more (e.g., 65% indicated they would be interested in receiving more training). Overall the research shows that police officers are aware of the existence of autism and other pervasive developmental disorders, however it is unclear whether the training effectively teaches officers the difference between a mental illness and developmental disorder. However, encouragingly, the majority of officers are self-aware about the gaps in their knowledge and are open to more training. The study of police training is even more important with this knowledge as officers strive to perform their job to their best capacity and social science research can help them do so.

Effectiveness of Police Training

Brief History of Police Training

In the last few decades police training has become an important issue for departments. Some scholars state that this is due to the changes in what police officers and their role *is* and the higher expectations placed upon officers – such as acting as in a caring, mental health role for those in crisis (White & Escobar, 2008) and becoming the "street corner psychiatrist." However, one issue with police training seems to be effective implementation with the desired outcome, that is, after training, are police putting what they learned into action with fidelity and thereby achieving best-case outcomes? Some studies have argued that the root of this issue is an existing disconnect between academy training and the relevant, day-to-day work of policing (White & Escobar, 2008). One such suggestion is that education can be increased and become evidence-based by incorporating relevant material that illustrates the actual reality of police work into the academy training (Bayley & Bittner, 1984). However, relevant material cannot be created until it is determined what *exactly* police are being taught on a particular topic, which is the purpose of this study.

Police Training on Mental Health and Developmental Disorders

Understanding police perceptions, while important, is not the only aspect researchers should focus on. Is police training actually effective? In other words, does it *teach* the police the skills and tools it is meant to? Modell and Mak's (2008) findings of officers' self-reported training they have received indicates that officers are aware of their lack of knowledge and want to learn more to properly fulfill their duties. Therefore the validity of the training materials themselves must be studied. Laan, Ingram and Glidden

(2013), for instance, interviewed training coordinators and conducted a comparison analysis of the interviews and training materials against existing state guidelines. The authors did not specifically outline who was defined as a training coordinator, but it could be a law enforcement person in charge of the training designed by each state's commission (Laan et al., 2013). The authors determined 'guidelines' by using those suggested by the Police Executive Research Forum (PERF). PERF was chosen as a comparison as it specifically addresses police training on mental illnesses and disorders. PERF is a non-profit organization that provides research publications to law enforcement in order to enact more evidence-based practices. PERF's guidelines had a set of recommended topics that should be covered in training, consistency was defined as by totaling the number of recommended topics covered in the training materials. The results indicated that the training materials were inconsistent with the existing guidelines on PMIs and PDDs. For example, the existing training was inconsistent with PERF's recommendations for training time (8-15 hours, average was 5 or less). Effective training must therefore not only address the individual biases and barriers (such as *warrior mindset*) from the officers, but also ensure that it is meets state and national standards.

In 2008, New Jersey enacted a legal mandate that all first responders are required to receive training on ASD and other 'hidden disabilities'. Kelly and Hassett-Walker (2016) studied how the extent and adequacy of the training met the official legal guidelines. An online survey consisting of 21 multiple choice questions was completed by relevant first responding personnel (n = 226 participants from various agencies). Results showed that 72% of the agencies had provided some form of training (23% had

not despite the mandate). Of the agencies that had provided training, 77% provided two hours or less, and 46% of respondents felt that the training provided was only somewhat effective or not effective at all (51.7% responded that the training was *effective* or *highly effective*). Interestingly, Kelly and Hassett-Walker found that some of the training mediums provided to participants were not legally mandated by the statute such as a 'read and sign'[2] and video training – which 19.7% of respondents reported that this was their only training received (2016). The results of Kelly and Hassett-Walker's (2016) study highlight a second important issue in police PDD training-- even when mandated the provided training may either be lackluster in content or not satisfy the statute criteria.

For most police departments, training on mental health comes from Crisis Intervention Team (CIT) education classes. CIT was first developed in Memphis Tennessee in 1988 in response to a fatal shooting of a mentally ill man by a police officer that sparked a public outcry (Dupont & Cochran, 2000). The purpose of CIT is to improve police officers' ability to interact with PMIs while diverting them away from traditional criminal justice responses – such as arrest – to mental health services (Watson et al., 2008). CIT is intended as a pre-booking technique; specific trained officers act as first-line responders involving PMI and a liaison between PMI and mental health services who aim to decrease the number of arrests. Watson et al. (2008) reviewed the current literature on CIT, citing the need for researchers to understand its effectiveness as it has been implemented in about 400 departments around the nation. The authors concluded

[2] 'Read and sign' refers to training materials that participants read on their own and then sign some sort of document that shows they completed the training. This is compared to training that has an instructor with a lesson plan and who elaborates or answers questions. Lectured trainings typically also have students sign a document to show they were present for the training or even sometimes have them take a short exam.

that current research focuses more on officers' ability to effectively recognize mental illness and their confidence level in their knowledge rather than examining the conceptualization of CIT training. For instance, one of the critiques of the CIT program is that its success is dependent on the cooperation of local organizations. In the original Memphis model, the police department and local hospitals and emergency room devised a specific type of working relationship that assisted police getting people in crisis appropriate help faster. If the mental health services and police department do not have good relations or open lines of communication, the success of CIT is limited. In addition, CIT has been widely implemented in a short amount of time so a uniform curriculum does not exist. For researchers, this lack of uniformity makes it difficult to empirically determine CIT training's validity and generalizability.

In summary, whether it is research on police perceptions or the validity and effectiveness of the training officers receive, the empirical conclusions that can be drawn at this point are moderate at best. The perception research indicates that officers overall view the training they've currently received as not very effective or helpful. In addition, many indicate a desire for more training. Moreover, other studies (Modell & Cropp, 2007) have found that current training programs fail to address the barriers that can impede officers from receiving effective training. Other studies evaluating the effectiveness or content of the actual training found that many do not meet state mandated guidelines or are too varied for a more rigorous evaluation study. One large gap within this current research however is that none analyze the true knowledge content of the training, especially communication and de-escalation techniques. In addition, only

one or two studies have a narrowed focus of looking at ASD, which is an important gap to address given the high prevalence rate of this disorder. Therefore, this thesis aims to analyze the content of the state training literature with a special focus on ASD.

METHODS

This study examines the extent to which ASDs are covered in police training materials. Due to the large gap in research, this study can be viewed as preliminary and as complementing the few similar studies (Kelley & Hassett-Walker, 2016; Laan, Ingram, & Glidden, 2013) that have also analyzed the ASD training content of law enforcement. The specific focus of the current study is to analyze state sponsored material that is provided to officers (elaborated below). The overall purpose of this study is to examine the quantity and quality of material on ASD provided to officers, specifically de-escalation and communication techniques.

Conceptualization

Firstly, it must be determined what constitutes *training materials*. The scope of this study is particularly focused on the materials provided to officers by their *departments*[3]. *Departmental literature* is conceptualized for this study as training materials owned or distributed by the police department directly to its officers. This could include General Order Manuals (GOM) or presentations provided by local professionals. However, not all departments draft their own materials. For instance, some departments can contract out their specialized training to private businesses that provide experts for

[3] Departments can refer to various entities. For some, the state police department provided materials and if these were not available city police departments were asked for their materials. *Departments* refer to entities of police but can vary at which level (i.e. state, city)

training. While this kind of material is not published by the department itself, the request for materials in the present study was worded in such a way that asked the public records officer to include all training material. If a department's *only* material is developed by a third party, it is considered for this study as it is the only source those officers receive. Put another way, this study is interested in the information continuously available to officers through their departments. Therefore if a department's only material is drafted outside the department, it fulfills the criteria for this study.

The most common model of law enforcement training is CIT, which has partnered with the National Alliance on Mental Illness (NAMI) to help spread the original Memphis Crisis Model across the country (Pauly, 2013). Although CIT is to date the most comprehensive training model for law enforcement and mental illness, it is not a mandatory program (Pauly, 2006). For some departments, CIT is the only source of material available for officers. CIT can also be adapted and varied depending upon the department. For example, some departments may use the Memphis model verbatim while others may take the core concepts of CIT and change them to fit the needs of their specific community. However, some departments may also use CIT in their training as well as provide GOM instructions. Therefore not all officers in a state's counties receive the training. To counterbalance, local departments may add sections of their own general manuals provided during academy training to provide new officers some knowledge. For instance, as mentioned before some departments' GOMs have sections on mental illness.[4]

[4] Kentucky was one such state that provided their GOM sections on mental illness. The focus of the GOM was to educate officers on the proper criteria for the involuntary commitment of citizens

In these sections, officers may be provided information on the intersecting legality issues and mental illness, such as when it is appropriate to involuntarily transport someone to the hospital. These two materials would theoretically, in conjunction, train officers on how to de-escalate a crisis situation (CIT) and provide legal knowledge on what is within their discretionary power in regards to proceeding with the individual (GOM).

The main focus of this study is to analyze the latter types of materials, ones in which the department or state police organization created the material. Again, however if the only material the department provides is CIT, this is considered *departmental material* since it is the only resource the officers would have. As described next, departments were requested to send 'all materials' that their officers would be shown when trained on mental health; these include PDF files, power point slides and hard-copy physical manuals.

Materials

All manuals were requested through the federal Right to Know Act (RTKA) or Freedom of Information Act (FOIA). Both these Acts allow for the public to submit requests to government agencies for information in the name of transparency. At the outset of this study, the intention was to focus on state training material, as that would mean officers throughout the whole state are receiving consistent training. However, this was not always possible as not all states have statewide training materials on mental health. When states don't have a centralized training method, it falls to counties or individual departments to provide the training. For instance, Virginia has state literature given to officers and Fairfax County provides additional CIT training even though it is

not required. Trainings also take place in different arenas and different times. For instance, states that use the CIT model typically have intermediate and refresher courses. The intermediate course is the full training – however that state defines it – whereas the refresher course is recommended for officers to update their knowledge on the core aspects of CIT and mental health training (some of the manuals received include refresher courses) (McGriff, 2010). Some states may provide the training in the academy or before cadets become fully fledged officers, as Fairfax County does, while others provide the training to officers already in the job who are at various stages of their careers. Therefore this study is more of a preliminary exploration as it is quite difficult to analyze training materials across the states since they are so varied.

RTKA & FOIA Requests

A majority of states have an official submission document either to be printed out and mailed, or submitted electronically. A records department is the recipient of the request and who searches and gathers the relevant material based on the request. Depending upon the state, the records department for these types of requests were either embedded in the law enforcement department, the state attorney general's office, or sometimes the department of public health. The records departments are permitted discretion on requests depending if the request falls under exempted materials. In addition, five states had an in-state residency stipulation (i.e., only persons residing in the state are allowed to submit requests). If a state did not have relevant materials or did not allow for the request of these types of materials based on their RTKA or FOIA forms, the departments of a major city within that state was requested instead. This decision was

made because police diffusion research indicates that larger departments adopt newer policies and technology more rapidly than smaller ones (Weisburd & Lum, 2005).

The majority of states had an official submission document either to be printed out and mailed to the records department or submitted electronically. However, some states proved more difficult than others in the request process. For example, five states have in-state residency stipulations. In total, 48 departments (one per state) were contacted with requests for their state-level training manuals. Idaho and Montana were problematic with their requests. Both state police have pre-made formats for their FOIA requests which focus only on traffic incident reports. Currently, the author is exploring alternative ways to gather the relevant material – if it exists – from these states. In the requests, although the author specifically requested to receive all data electronically, this was not always possible in some cases as some departments only maintain hard copies. In these instances the records department made copies of the original documents and mailed the copies to the author (sometimes for a fee).

Twenty-three of the 48 states responded to the requests sent; of these, four informed that they could not comply with the request because either there was no relevant material on file or based on pre-existing guidelines could not fulfill the request (Materials from three other states were not received for various reasons – see Appendix B). New York State police stated that they had received a large influx of requests and the time frame needed to fulfill the request would take until April 2017, and then it is not guaranteed (and it was not received in April). In some occasions, such as with Mississippi, the state police did not have any centralized request system so a large city

was selected for the study (in this case, Jackson). Appendix A indicates the current status of each state.

Coding Sheet

The coding instrument was created by developing a list of relevant topics based on the research questions of this study, and by reviewing several manuals. In creating it, the coding instrument developed organically or from a bottom up approach, as there is little research on police training on a specific developmental disorder (such as autism). The original coding instrument was revised multiple times to expand on important topics or delete those determined to be irrelevant. A top down approach was also done with the revised coding sheet once manuals from departments began to be received. Using a few manuals, the coding instrument was revised again after looking at some of the manuals to determine if any other topics were relevant and not being captured. As stated earlier, training varies extremely by state and even by county, therefore in order to capture the topics of importance to this study a coding instrument needed to be specifically developed. The topics needed to reflect questions that captured the extent of training police received on ASDs, the content of that training, and communication and de-escalation techniques specifically meant to aid with interactions with ASD individuals. The coding sheet has a total of five covered topics. The finalized coding sheet is in Appendix C.

Manual Characteristics

This topic is the ‘demographics’ of the manuals. As the sample population is documents rather than participants, coding elements capture the different characteristics

of the manuals so that they may be compared. This includes aspects like the number of pages and format of material included in the training.

Major Topics

This section is relatively short and focuses on the specific PDDs and mental illnesses touched upon in the manuals. In order to determine the extent of the training given to officers, this section is meant to determine what proportion is allocated to PDDs compared to mental illnesses. The coding instrument allows for any mental illness that is referenced to be captured, so to gather a similar broad range for PDDs, major sub-diagnoses were added to the sheet. This includes diagnoses such as Rhett's, Childhood Disintegrative Disorder (CDD), Mental Retardation, Intellectual Disabilities (ID), Asperger's Syndrome and Autism.

Content

The third category is general content questions such as definitions, if the manual differentiates between mental illness and developmental disorder, and if the manual cites any scholarly or professional sources.

Autism Disorder

This section focuses specifically on autism and what is covered by the training. In this portion of the instrument, the questions capture various aspects of the disorder, such as characteristics, definitions and other more clinical topics.

Policing

The final category focuses on communication and de-escalation techniques. One portion of this section focuses on barriers and biases in training, specifically about mentions of the *warrior mindset* or other barriers/biases. In subsequent analyses and

discussion, *warrior mindset* refers to a particular craft aspect of policing. Characteristics of the traditional *warrior mindset* connect to a theory of policing in that officers, to cope with the immense stressors of their occupation, develop certain coping skills such as a distrust of outsiders, cynicism and viewing their day-to-day operations as a battlefield (Willis & Mastrofski, 2017). This has become a sort of stereotype of officers that now contrasts with self-reports of their roles and views (Willis & Mastrofski, 2017). For the purpose of this study, *warrior mindset* represents more of a subset style of policing that does not focus on resolving conflicts – particularly with those in a mental health crisis.

Other Comments

A final section allowed the coder to note any important comments that were not otherwise covered in the coding sheet.

Overall, the coding sheet went through six revisions (all revisions of the coding sheet are kept on file and dated). Because the purpose of this study is an archival analysis strictly of the material, the coding instrument is a mixture of quantitative and qualitative data collection. Primarily, the coding instrument determines if information is present, absent or not applicable. However the definitions given on autism, developmental disorders and the like are examined in a qualitative manner by examining the full provided definitions. In addition, qualitative analyses were done on the quality of communication and de-escalation techniques outlined in the manuals if available.

Procedures

As a content analysis, the inclusion of the items in each of the five categories was documented on the coding sheet along with manual "demographic" information for that

particular item, such as number of pages. One coder recorded the absence or presence of each item as per instruction on the coding sheet. In addition to recording whether an item is present, the coder also provided details about how the information is presented about each topic. This refers to the page length and the formatting of the page. Other topics, such as definitions or de-escalation techniques, the coder recorded verbatim with the corresponding page number(s). A pilot test of the coding sheet was performed on three of the manuals (Massachusetts, Arizona, and Fairfax County VA's CIT training) to determine if the instrument captured the appropriate elements and if any sections needed to be changed or edited. A second coder was recruited to perform inter-rater reliability on 10% of the manuals (n = 2) to determine that the coding sheet and author were reliable with each other. Inter-rater reliability for the Massachusetts and New Jersey manuals were 90.3% and 83.9%, respectively (28 and 26 items in agreement, of 31). Any discrepancy between the coders were discussed and resolved. Quantitative data were entered into SPSS for analysis. Descriptive analyses were run as this study is exploratory and one purpose is to determine if more research is needed in this area.

RESULTS

The first research question examined the extent to which police are trained on autism spectrum disorders. Although the primary findings of this thesis derive from the content analyses of the 17 coded manuals, it is also important to note that three states—California, Louisiana, and Mississippi—claimed not to have any materials relevant to this thesis. Thus, to what degree police are trained in these three states on mental health and/or developmental disorders is unclear. While a good portion of the manuals discussed autism in some way, the focus was generally on high functioning, verbal individuals rather than also addressing the portion on the spectrum that are non-verbal or low functioning. The second question examined the actual content of the training material. While autism was discussed in about half of the manuals, it was not as prevalent as the training on other mental illnesses such as schizophrenia even though the worldwide diagnoses of these disorders will be discussed later as comparable. The third research question examined the types of communication and de-escalation techniques officers were taught for ASD specifically. *If* these techniques were specifically provided, the focus once more was on high functioning individuals which leaves a significant gap in knowledge for officers when it comes to interacting with this specific population of citizens.

Manual Characteristics

A total of 18 manuals were collected; however, only 17 were analyzed. The reason for this is that two of the manuals are the CIT training for Fairfax County, taught at different times. However the material is identical so only one of them was coded to avoid a duplicate result. The average number of pages is 116 (SD =139.7), although the range was quite large, from a minimum of 4 to a maximum of 580 pages. The median number of pages was 74. Only five of the manuals are CIT specific (29.4%). Most of the manuals had more than one type of material included -- such as a Power Point presentation and a CIT manual or a GOM section -- (*n* = 10, 58.8%) with the second most only consisting of a printed manual (*n* = 4, 23.5%). Only three manuals had explicit prerequisite requirements for the trainers (17.6%); in the majority it was unclear whether the facilitators of the training required any pre-requisite experience (*n* = 9, 52.9%). Arizona's trainer needs to be POST[5] certified, Maryland's trainer had to be a Pathfinder's staff member, and Texas' trainer either had to complete 1 of 2 courses, have documented experience in crisis intervention and de-escalation skills or be a mental health professional. Table 1 lists the demographic data of the 17 manuals.

Table 1. Manual Characteristics

State	Total Page Number[6]	Is the manual CIT specifically?	Materials included	Prerequisites for the trainer
Arizona (State Dept. of Public Safety)	195	No	More than 1 – power point file	Yes

[5] POST stands for Peace Officer Standards and Training Board
[6] Includes regular pages as well as slide pages if the manual has a manual and/or PowerPoint

Kentucky (Kentucky State Police)	4	No	Printed Manual – Single Spaced	No
Maryland (State Police)	61	No	More than 1 – single spaced, power point file	Yes
Massachusetts (State Police Academy)	29	No	PowerPoint – 6 slides per page	Unknown
Michigan (State Police)	63	No	More than 1 – each power point slide is 1 page	No
Missouri (State Highway Patrol)	100	No	More than 1 – text is double space, 1 slide is full page	Unknown
New Jersey (Dept. of Law and Safety, State Police)	20	No	Printed Manual – Single Spaced	Unknown
New York (State Office of Mental Health)	90	No	More than 1 – text is double spaced	Unknown
North Dakota (Training Academy)	74	No	More than 1 – power point and single spaced	Unknown
Rhode Island (State Police)	44	No	More than 1 – single spaced and power point	No
Tennessee (Tennessee Department of Mental Health and Substance Abuse Services)	106	Yes	Electronic Manual – single spaced	Unknown
Texas (Commission on Law Enforcement	580	Yes	More than 1 – power point and single spaced	Yes

Officer Standards and Education)				
Utah (Salt Lake City PD)	21	Yes	More than 1 – single spaced	Unknown
Vermont (Dept. of Public Safety, State Police)	10	No	Printed Manual – Double Spaced	No
Virginia (State Police)	189	No	More than 1 – single spaced, 3 slides per page	Unknown
Washington (State Criminal Justice Training Commission)	264	Yes	Electronic Manual – single spaced	Unknown
Fairfax County, VA	122	Yes	Printed Manual – 3 slides per page	No

Major Topics

Pervasive developmental disorders (PDDs) were covered only in 29.4% of the manuals (*n* = 5). Autism was covered in 58.8% of the manuals (*n* = 10). Asperger's Syndrome was only mentioned in 1 manual while Rhett's and CDD were not covered in any. Mental retardation and intellectual disabilities were both covered in 17.6% of the manuals (*n* = 3). Compared to mental illnesses discussed in the manuals, personality disorders were covered in the same number as autism (*n* = 10, 58.8%). Depression/Anxiety disorders were covered in 70.6% of manuals (*n* = 12), psychosis was covered in 82.4% of manuals (*n* = 14), and other disorders such as mood disorders or traumatic brain injuries were covered in 64.7% of manuals (*n* = 11). These results indicate that while autism is the most commonly discussed developmental disorder, it is

still not discussed in as many manuals as mental health disorders. In addition, only 35.3% (n = 6) of manuals implicitly or explicitly differentiated between mental illness and developmental disorders. *A subquery of this paper's second research question was how does ASD training compare to the training provided on personality or mood disorders?* According to these results, officers are trained disproportionately more on mental illnesses compared to developmental disorders and thus are unlikely to be properly instructed on the clinical differences between mental illness and developmental disorders.

Content

The second research question was concerned *with the content of the manuals*. It was found that PDDs were only defined in 29.4% of manuals (n = 5), and of these definitions 35.3% (n = 6) were cited using scholarly sources in relation to their definitions or discussion points of PDDs or ASD. Three were governmental sources (17.6%; e.g., Center for Disease Control, National Institute of Mental Health) and four were not otherwise defined (e.g., disorder specific national associations like Autism Speaks) as non-profit, departmental or medical (23.5%). These results indicate that the sources of the informational content in the training cannot be fully determined. However this unknown can also be attributed to the variety of training designs across states. For instance, some departments have different sections taught by different individuals such as when a local psychiatrist is in charge of facilitating the section on diagnoses, or a lawyer teaches the section on mental health law. In these instances, the professional knowledge of the facilitator lends credibility to the lack of cited sources. However without

specifically knowing this, it cannot be concluded either way that these manuals' content is accurate or evidence-based.

Autism Disorder

Six of the seventeen (*N*) manuals implicitly or explicitly defined autism in their training material (35.3% of the total *N*, 60% of the relevant subsample that discussed ASD in any context *n* = 10), which is interesting as 58.8% (10) of the manuals discuss autism in some context. However some of the manuals, rather than using a clinical definition, described autism by the characteristics of the disorder. The characteristics described in the manuals can be seen in Table 2. For example, Maryland's manual defined autism as individuals who have "three major developmental differences: communication, socialization, unusual interest or behaviors, known to wander." Massachusetts also listed characteristics within the definition but specified that autism is "a complex disorder of the central nervous system", including more of a neuropsychological component in their definition.

Only four manuals (*N* = 23.5%, *n* = 40%) discussed the uniqueness of autism and how the disorder can manifest on a spectrum. Three manuals (*N* = 17.6%, *n* = 30%) differentiated between high and low functioning autism, an important distinction especially for officers when it comes to communicating with individuals. For instance, 25% of individuals on the spectrum are non-verbal (Baio, 2014; Philip et al., 2012), which makes means officers should approach situations in a different way than they would someone who is verbal. However, few of the manuals discuss the uniqueness of the diagnoses as well as the different needs of high and low functioning individuals.

To what extent are police trained on ASD? While only six of the manuals defined autism, this result is not necessarily alarming. For police officers, a clinical definition may not be useful in the field in terms of helping guide their discretion when confronted with a crisis situation. However, the lack of direction about the uniqueness of ASD manifestation and the differences between high and low functioning persons can be problematic for officers if they are unaware of this information. If an officer is not provided proper guidance on how autism can effect each person or how high and low functioning individuals differ, this could affect how they decide to proceed in a crisis situation. If an officer is taught to be aware of how someone can be low functioning on the spectrum, they would most likely act in a decidedly different manner than if the person was high functioning. In these manuals, when officers are trained on ASD, the training focuses mostly on the well-known characteristics of high functioning individuals (i.e. ability to communicate, minimal assistance or supervision needed).

Table 2. Characteristics of Autism Discussed in Manuals

Characteristic	**Percentage of Total Sample (*N* = 17)**	**Percentage of Relevant Subsample (*n* = 10)**
Lack of eye contact	35.3% (*N* = 6)	60% (*n* = 6)
Sensory issues	23.5% (*N* = 4)	40% (*n* = 4)
Communication issues	47.1% (*N* = 8)	80% (*n* = 8)
Lack of empathy	11.8% (*N* = 2)	20% (*n* = 2)
Processing delays	11.8% (*N* = 2)	20% (*n* = 2)
Issues with social interaction	5.9% (*N* = 1)	10% (*n* = 1)
Repetitive behaviors	29.4% (*N* = 5)	50% (*n* = 5)

Abrupt mood changes	5.9% (*N* = 1)	10% (*n* = 1)
Resistant to change	23.5% (*N* = 4)	40% (*n* = 4)
Lack of comprehension of social norms	23.5% (*N* = 4)	40% (*n* = 4)
Echolalia	29.4 (*N* = 5)	50% (*n* = 5)
Stimming	17.6% (*N* = 3)	30% (*n* = 3)

Policing

Forty-one percent of the manuals (*n* = 7) implicitly address an officer's behavior when interacting with someone who's on the spectrum. This included behaviors like turning off the sirens of police vehicles as this could cause the person to become overly stimulated and escalate the situation. Another specific issue with autism is that many individuals do not like to be touched and can greatly increase the risk of the individual escalating their behavior and risking their own safety and the officers'. Only two manuals (11.8%) implicitly or explicitly address this issue. For example, Maryland states that "touch is different for everyone [individuals with a developmental disorder]" and Washington states "Many do not like to be touched. Some are so sensitive to touch that an effort to reassure by touching may cause a difficult situation to escalate quickly to an impossible situation." Another issue is if someone on the spectrum is taken to jail, are officers instructed to segregate them as they could be victimized by others. Three of the manuals implicitly or explicitly address this issue (17.6%). This could be problematic for many departments as it could risk the possibility of someone on the spectrum being injured while in custody and result in litigation. If officers are not aware of how developmental disorders, particularly autism, create higher risk of victimization, they

cannot take predetermined steps to prevent potential incidents. The study also examined whether the provided training gave officers information about services available to divert people with ASD from jail, two of the alternative services were government run facilities (11.8%), one was a private run facility (5.9%), two were non-profits (11.8%) and one was not otherwise classified (5.9%).

Are police taught communication and de-escalation techniques? Ten of the manuals (58.8%) implicitly or explicitly list communication techniques; however, most of them are geared toward higher functioning and verbal individuals. For example, there was an implicit assumption that the person was verbal. These includes things like allowing the person extra time to respond to questions, to speak slowly and clearly, and to avoid metaphors and sarcasm. The Maryland manual did state in their training materials that "if the person is nonverbal make every effort to get information from the person first" and that officers should search for an ID bracelet or card that may have more information about the individual. The Michigan manual also suggested that if the individual is non-verbal officers can utilize pictures or a computer to help communicate however it did not provide any concrete discretionary guidance. The results indicate that while a little more than half of the manuals provide specific communication techniques for interacting with someone on the spectrum, they are focused on those who are verbal and higher functioning with some techniques that could be applied to those who are non-verbal.

Out of the 17 manuals, only four (23.5%) contained de-escalation techniques specific to ASD – Maryland, Massachusetts, Michigan, and New York. The first three

states list techniques which can be seen in Table 3. New York's simply said that if an officer gives an individual time and space, that person may deescalate their own behavior. These four manuals did include techniques that are appropriate and apply to both high/low functioning individuals and verbal/non-verbal, but the majority of manuals did not, indicating that most officers are not given proper education on deescalating individuals on the spectrum.

Another section on policing of interest for this study were the biases and barriers that may inhibit officers and individuals in crisis from communicating effectively. The study coded for cynicism, stereotypes, fear of mental illness and other. Eleven of the manuals (64.7%) addressed another topic, which most often was the stigmas surrounding mental illnesses. The *warrior* and *social service* mindsets were not addressed in any of the manuals. Overall more than half of the manuals addressed some form of barrier for communication, with the focus mostly on the stigmas connected to mental illness.

Other Comments

The coding instrument also provided a section for coders to note any other observations. Some manuals were noted to contain general communication techniques – meaning that they were meant to be applied to any crisis situation but does not take into account the specific nuances of a particular mental illness. The states that had these general communication techniques were Missouri, New York, Texas, Vermont and Washington. However, only two states had a section of generalized de-escalation techniques meant to be applied to any crisis situation (New York and Tennessee). Maryland also had a section on how officers could effectively conduct interviews with

people who have a mental illness. Arizona and Michigan also included videos to add to their sections on developmental disorders and mental illness. The Fairfax CIT, Maryland, New York and New Jersey manuals also include sections on local programs for the police to utilize. The most popular were Project Lifesaver and Pathfinders. Project Lifesaver is a non-for profit that helps police departments get equipment that help decrease the risk of wandering – a chronic issue with ASD individuals and those with Alzheimer's, where people will simply walk away from their home without a way of remembering how to get back. The Pathfinders program is a way for local police departments to keep information about those with ASD on hand in case they wander or have contact with police. Parents or caregivers fill out forms with their address, the person's name and other relevant information.

Overall, training manuals have improved over the last ten years in regards to including sections on ASD however the knowledge is rather one dimensional when ideally it should be more extensive to assist officers in their discretionary decisions when approaching a crisis situation with a person with ASD.

DISCUSSION AND CONCLUSION

There were three major research questions this thesis sought to answer. First, to what extent are police trained on ASD? The second was what is the content of these manuals? Third, are police taught de-escalation and communication techniques that are specific for ASD? While most of the literature, if it has any focus on ASD, specifically studies officers perceptions of the disorder this does not add much knowledge as to what sort of training they are receiving. The two studies that have analyzed police training – Laan and colleagues (2013) and Kelly and Hassett-Walker (2016) – mainly sought to answer questions about how the training was designed and if it was law or empirically compliant rather than qualitatively analyzing the content of the training. In the scholarly literature there exists a gap in the research between police perception of disorders and the training they receive and the legal compliance of the training – leaving little to no guidance as to exactly *what* officers are being taught.

Police and Content Training of ASD

What is the extent and content of the training police received on ASD? Autism is discussed in some context in little more than half of the manuals (n = 10). Autism is still not discussed as much as mental illness. Depression/Anxiety disorders were covered in 70.6% of the manuals (n = 12), schizophrenia and other psychotic disorders were covered in 82.4% of manuals (n = 14), and other disorders such as mood disorders or traumatic

brain injuries were covered in 64.7% of manuals (*n* = 11). This is concerning as the CDC estimates that 1 out of 68 children will be diagnosed on the Autism Spectrum (Christensen et al., 2016). In addition, the CDC estimates that the worldwide prevalence rate of ASD is about 1% (2016), whereas rates of schizophrenia range only from 0.5-1% (2013). One can conclude that the design of the current training indicates that other mental illnesses will take up more of an officer's time rather than those with ASD or other developmental disorders. However the prevalence rate of autism has been increasing, meaning that police officers will be encountering these individuals more and more in different situations.

In addition, not many sources were cited in the manuals. It is unclear then where departmental literature sources their information. Do local professionals provide information, such as clinicians or other mental health providers? Are the techniques taught evidence-based? This lack of cited knowledge is not only an issue for definitions of disorders, but also the communication and de-escalation techniques that are provided. Therefore it is difficult, even when coding for source material, exactly how the manuals are developed. These results are particularly telling and important for future research, as it highlights the lack of knowledge about how and by *whom* these manuals are created by.

Autism as a topic was discussed in 10 of the manuals, however only six of those actually defined the developmental disorder. Some of the manuals, rather than define it, simply used the behavioral characteristics to substitute as a definition. The most often discussed traits were communication issues (*n* = 8), lack of eye contact (*n* = 6), repetitive behaviors (*n* = 5) and echolalia (*n* = 5). The least discussed traits were abrupt mood

changes (n = 1), issues with social interaction (n = 1), lack of empathy and processing delays (n = 2). While communication issues certainly vary depending on where a person falls on the spectrum, almost all talked about traits also vary widely depending on the severity of a person's diagnosis. The traits most and least discussed are indicative of what officer are and are not being trained on when it comes to persons with ASD. The lack of knowledge of these traits that vary depending upon the spectrum can affect how an officer interacts with persons with ASD and how an officer responds to a situation.

In addition, only three (n = 30%, N = 17.6%) of the manuals differentiate between high and low functioning individuals and the implications for officers when they interact with individuals on the spectrum. This is problematic as it's estimated that 25% of people with ASD are non-verbal, and this can sometimes overlap with lower functioning levels (Baio, 2014; Philipet al., 2012). It seems that some departments have become aware of autism enough to address the disorder in general, but do not provide enough discussion as to how the uniqueness of the spectrum of diagnoses can affect an officer's interactions. The purpose of the training should not aim to teach officers to diagnose people, but rather, how to successfully interact and communicate with citizens who are at various levels of functioning in order to ensure the safety of themselves and others. As Teplin and Pruett (1992) labeled the police's emerging role as a 'street corner psychiatrist', the focus of the training should be preparing officers for interacting with persons with ASD in the context of a law enforcement environment by having the tools to communicate given their diagnosis rather than focusing on diagnosing.

Communication/De-Escalation Techniques

Out of the 17 manuals, only 10 have communication techniques but five of those were techniques were meant to apply to any type of mental illness or developmental disorder. These techniques focus mostly on high functioning, verbal individuals that officers may have contact with. Only two manuals included suggestions on how to communicate with someone who is nonverbal. The overall focus is still on preparing officers on interacting with verbal or high functioning individuals, as Modell and Mak (2008) found when 35% of surveyed officers listed 'Rain Man' as their response to characteristics of autism. This focus doesn't provide officers with the necessary tools to communicate or de-escalate individuals who do not fit this mold. For example seven states relayed the importance of how an officer's behavior (e.g., speaking in a loud voice) can affect persons with ASD but there is a lack of direction by how so few states provide specific communication techniques for this specific disorder.

In regards to de-escalation techniques, only four of the manuals included them. These manuals provided techniques that are applicable to both high and low functioning individuals. However most manuals included no de-escalation techniques meaning that a majority of officers are not given techniques specific for ASD individuals. In addition, only two manuals discuss how person with ASD do not like to be touched and how doing so can escalate a situation. As a specific trigger for a disorder, it was expected that it would be discussed in more manuals than what was found. While there a good amount of general techniques provided, officers still lack specific techniques for persons with ASD that could improve their interactions with officers.

Comparison to Existing Research

In policing literature, there is not much focus on ASD and training outside of police perceptions of ASD. Laan and colleagues (2013) assessed the trainings by interviewing the training coordinators. To assess the overall training content the authors used the PERF recommendations for training as guidelines of assessment. Laan et al. (2013) focused mostly on the time length of the training and found that the training lacking in terms of the time length of the training. Unlike that study, the focus of this research specifically studied the content on the training and what the officers were specifically taught. While some of the manuals in this study listed the timeline of the trainings, it was not always given (and thus not coded). However the conclusions of Laan et al. (2013) are similar to those found here in that they used a type of evidence-based recommendations to assess the training and found that the existing training did not meet these standards. The present study concluded that there is little evidence-based strategies accredited in the sourcing of the training manuals.

Kelly and Hassett-Walker (2016) focused their study on whether state mandated training on ASD and other 'hidden' disabilities for emergency responders met the legal statutes set out for the training. The focus of the study was on the legal adequacy of the training and the responders' perceptions of the training. One interesting result they found is that 46% of participants indicated that the training was either *somewhat effective* or *not effective*. Connecting this study and the Kelly Hassett-Walker (2016) study, the participants' perceptions that the training can be not very effective is in agreement with the results of the authors own coding of the training. The results of the Kelly Hassett-

Walker (2016) validate the results of this study in that it is important to study the actual training content in order to determine its effectiveness.

Limitations

The largest limitation of this study is the relatively small sample size. Only 18 states provided manuals of the 49 requested (36.7%). A second limitation is it is difficult to generalize the results of the study because each manual by state is largely unique. However, this study was meant to be preliminary as there have been, to date, no other empirical work analyzing the content of police manuals and ASD. Nonetheless, the results from this study have provided clearer guidelines for future research, and police practices and policies.

Implications and Future Research

The results of this study, rather than providing answers, generated more questions. As a preliminary, exploratory study on police training and autism it was meant to serve as a guide for future research and eventually future policies. While the study results have revealed that autism generally is covered in about half of the manuals, *how* the information is gathered and put together remains unknown. First, a significant takeaway from this research is the distinct lack of evidence-based strategies not only in the designing of the manuals but also in the techniques taught in them. With so little empirical sources cited in the manuals it is logical to question where the information used is sourced from. One important question to answer going forward is whether departments use information obtained from other departments or from sources that are certified in specialized areas, such as a forensic psychologist speaking to officers about medications.

It is also unclear where the communication and de-escalation techniques taught to officers are from. Do local clinicians advise departments on this material? Are these techniques proven to have an effect in a crisis situation?

There is some difficulty in how these questions would be answered empirically as they are so general about policing training – namely what techniques are evidence-based that affect officer behavior. However in criminology a similarly general topic has generated a great amount of scholarly attention. Community policing has become a dominate strategy over the last 25 years, particularly since the 1994 Crime Bill (Cordner, 2014). Training on community policing strategies have spawned a multitude of studies in different areas (drug use, gang violence, juvenile crime, etc.) with a plethora of results that help guide police decision making on addressing local issues (Willis, Mastrofski & Kochel, 2010). If similar scholarly attention is given to police training on ASD or any type of vulnerable population, there can be great strides made in the empirical knowledge of effective, evidence-based police training on how best to communicate with and deescalate individuals with ASD known to have a wide spectrum of functioning.

A second important takeaway from these results are that if the manuals at this time are only addressing issues like ASD generally, then what should an ideal manual's content comprise of? One important inclusion for training materials is to address stigma in a general sense, and while 11 manuals did that, the question once again concerns how effective the provided material is. However these 11 manuals did not address how stigma about mental illness can affect an officer's response to ASD, as Modell and Cropp's (2007) study indicated. A strategy with some scholarly support is the provision of visual

materials. A study on the National Alliance on Mental Illness' (NAMI) 90 minute anti-stigma video for mental illness – "In Our Own Voices" (IOOV) – was conducted with police officers and measured the effect of stigma. The IOOV consists of face-to-face stories about the challenges those with mental illness face (Corrigan et al., 2010). The officers in the intervention group who saw the IOOV video indicated from their pre-post test results that the video did have a positive effect on reducing stigma. Training material on autism could include either a video or in-person sessions with community members who have ASD to combat stigma. In addition, the communication and de-escalation strategies should be taken from reputable sources. If departments do not have any local clinicians or the resources to have professionals design their manuals, many advocacy groups such as Autism Speaks provide free resources for emergency responders and can assist them with any specific needs they may have. Overall, however, the core purpose of the manual should include relevant material that would teach officers to effectively evaluate the situations they encounter and determine the best responses to ensure the safety of everyone and to elicit the information needed to do their job. More in-depth studies are needed to determine *how* the manuals and their training material are developed. For instance, a crucial research question could ask *what* mechanism of training best reduces stigma in officers. An intervention study could be developed where different officers receive different types of training – such as a traditional lecture, an interactive classroom setting or one that includes face-to-face contact with the targeted population. Possible outcome measures include rates of citizen satisfaction and arrest/diversion rates with persons with ASD. A second study also addressing this issue

should focus on police's perception of training, specifically focusing on addressing the needs of the officers and what they believe is relevant material. Do police want more diagnostic information on vulnerable populations such as ASD or more techniques on how to handle crisis situations? For example, an ideal training would have a dual, coupling component of assessment and reaction. An officer would be educated on how to assess the individual they encounter (e.g. is hallucinating, manic or over-stimulated in the case of ASD) and then would be given discretionary tools on how to appropriately react to the situation once an assessment is made. If an officer cannot accurately assess the person, they cannot respond in the most effective manner. Alternatively, if an officer does accurately assess the person but does not have the proper tools to react, then the situation may escalate. Determining what the police perceive is lacking in their training will allow for improvements. A third study could focus on how police interact with those who have ASD in a social disorder context rather than criminal. Learning the mechanisms behind police's discretionary decisions in this context could reveal similarities or new insight that could apply to police interacting with those with ASD in a crisis situation.

Conclusions

This study on police practices has found that police training still focuses mostly on mental illnesses such as schizophrenia. Whereas the prevalence rate of autism is higher than schizophrenia and increasing at a faster pace, the rate of training for police is not growing in the same proportion. In addition, this study revealed there is little to no training provided on the difference between high and low functioning individuals. While police are not meant to be clinicians, there is a marked difference between these two

points on the autism spectrum that would greatly change the most effective way for police to interact with them. Further, most manuals do not provide de-escalation techniques which are vital to police officers' ability to appropriately handle high-risk situations. The types of techniques an officer would use for someone in crisis who is bi-polar might not be the same for someone who is in crisis and on the autism spectrum. This is a gap in knowledge for the officers that could affect their safety and that of civilians and why more research like this study is needed.

Lana David, founder of Autism Unites, said "Behavior is communication. Change the environment and behaviors will change." Providing clearer guidelines for future research was one purpose of the present study. Future studies should focus on what and how officers are taught to communicate with people on the autism spectrum to ensure they are being taught effective techniques. Having more well-defined, evidence-based training will hopefully assist officers in creating an environment in crisis situations that will allow them to better connect with those on the spectrum.

APPENDIX

Appendix A

Figure 1. DSM-V Diagnostic Criteria for ASD

Diagnostic Criteria for 299.00 Autism Spectrum Disorder

A. Persistent deficits in social communication and social interaction across multiple contexts, as manifested by the following, currently or by history (examples are illustrative, not exhaustive; see text):
    1. Deficits in social-emotional reciprocity, ranging, for example, from abnormal social approach and failure of normal back-and-forth conversation; to reduced sharing of interests, emotions, or affect; to failure to initiate or respond to social interactions.
    2. Deficits in nonverbal communicative behaviors used for social interaction, ranging, for example, from poorly integrated verbal and nonverbal communication; to abnormalities in eye contact and body language or deficits in understanding and use of gestures; to a total lack of facial expressions and nonverbal communication.
    3. Deficits in developing, maintaining, and understand relationships, ranging, for example, from difficulties adjusting behavior to suit various social contexts; to difficulties in sharing imaginative play or in making friends; to absence of interest in peers.

Specify current severity:

Severity is based on social communication impairments and restricted, repetitive patterns of behavior.

B. Restricted, repetitive patterns of behavior, interests, or activities, as manifested by at least two of the following, currently or by history (examples are illustrative, not exhaustive; see text):
    1. Stereotyped or repetitive motor movements, use of objects, or speech (e.g., simple motor stereotypes, lining up toys or flipping objects, echolalia, idiosyncratic phrases).
    2. Insistence on sameness, inflexible adherence to routines, or ritualized patterns of verbal or nonverbal behavior (e.g., extreme distress at small changes, difficulties with transitions, rigid thinking patterns, greeting rituals, need to take same route or eat same food every day).
    3. Highly restricted, fixated interests that are abnormal in intensity or focus (e.g., strong attachment to or preoccupation with unusual objects, excessively circumscribed or perseverative interests).

4. Hyper- or hyporeactivity to sensory input or unusual interest in sensory aspects of the environment (e.g. apparent indifference to pain/temperature, adverse response to specific sounds or textures, excessive smelling or touching of objects, visual fascination with lights or movement).

Specify current severity:

Severity is based on social communication impairments and restricted, repetitive patterns of behavior.

C. Symptoms must be present in the early developmental period (but may not become fully manifest until social demands exceed limited capacities, or may be masked by learned strategies in later life).

D. Symptoms cause clinically significant impairment in social, occupational, or other important areas of current functioning.

E. These disturbances are not better explained by intellectual disability (intellectual developmental disorder) or global developmental delay. Intellectual disability and autism spectrum disorder frequently co-occur; to make comorbid diagnoses of autism spectrum disorder and intellectual disability, social communication should be beloiw that expected for general developmental level.

Note: Individuals with a well-established DSM-IV diagnosis of autistic disorder, Asperger's disorder, or pervasive developmental disorder not otherwise specified should be given the diagnosis of autism spectrum disorder. Individuals who have marked deficits in social communication, but whose symptoms do not otherwise meet criteria for autism spectrum disorder, should be evaluated for social (pragmatic) communication disorder.

Specify if:

With or without accompanying intellectual impairment

With or without accompanying language impairment

Associated with a known medical or genetic condition or environmental factor (Coding note: Use additional code to identify the associated medical or genetic condition.)

Associated with another neurodevelopmental, mental, or behavioral disorder (**Coding note**: Use additional code[s] to identify the associated neurodevelopmental, mental, or behavioral disorder[s].

With catatonia (refer to the criteria for catatonia associated with another mental disorder)

(**Coding note**: Use additional code 293.89 catatonia associated with autism spectrum disorder to indicate the presence of the comorbid catatonia.)

Appendix B

Table 3. State Request List

List of States and their Status **Bolded** states indicate materials have been received *Italicized* states indicate a response was received	
State	*Status*
Alabama	OAG does not maintain records, recommends to look at other government organizations (i.e. NAMI)
Alaska	Digital request sent
Arizona	Digital materials received on disk
Arkansas	Has provision of in state residency
California	No relevant records found
Colorado	Digital Request sent
Connecticut	Request sent via USPS
Delaware	Request denied, state has residency component for FOIA requests
Florida	Has materials but study does not have enough funds to acquire them
Georgia	Digital Request sent
Hawaii	Request sent via USPS
Idaho	FOIA request focuses on traffic incidents
Illinois	Digital Request sent
Indiana	Digital Request sent
Iowa	Digital Request sent
Kansas	Digital Request sent
Kentucky	Hard copy material received
Louisiana	No relevant material found
Maine	Digital request sent
Maryland	Digital manual received
Massachusetts	Digital manual received
Michigan	Hard copy material received
Minnesota	Digital request sent
Mississippi	No relevant materials found
Missouri	Hard copy manual received
Montana	FOIA request focuses on traffic incidents
Nebraska	Materials embedded in GOM manual, which they do not release
Nevada	Request sent via USPS
New Hampshire	Request sent via USPS

New Jersey	Digital manuals received
New Mexico	Digital Request submitted
New York	Has materials but study does not have enough funds to acquire them; acquired manual from Mental Health department
North Carolina	Digital request sent
North Dakota	Material from training academy digitally received – revamping program, will send new material once it's completed
Ohio	Digital request sent
Oklahoma	Digital request sent
Oregon	Request sent via USPS
Pennsylvania	Payment sent for materials
Rhode Island	Digital material received
South Carolina	Request sent via USPS
South Dakota	Request sent via USPS
Tennessee	Digital request sent **Found CIT manual online**
Texas	Digital manual received
Utah	Digital manual received
Vermont	Paper materials received
Virginia	Paper manual received
Washington	**Found CIT manual online**
West Virginia	Request sent via USPS
Wisconsin	Digital request sent
Wyoming	Request sent via USPS
Additional Materials	**Fairfax County, VA CIT materials received**
Total Manuals: 18	

Appendix C

Figure 2. Coding Sheet (Revised 4/23/17)

Coding Sheet by Manual – Autism and Police Training

Coding Date of Manual _____

Coder _____

Manual Characteristics	
Title/Name of Manual/State or City	
Number of Pages/Slides	
Date Manual Published and/or Revised	
Organization that owns manual or drafted it	
Is the manual specifically Crisis Intervention Training (CIT)	
List all materials that come with the manual (e.g. PowerPoint, physical manual, etc.)	
Prerequisites for the teacher/instructor listed?	

Topics Fill out the sections by topic if they are discussed in the manual In the left column, indicate if the topics were listed. Fill out the right column ONLY if at least one of the topics in the left are present. You may combine the pages for each topic (i.e. if autism is discussed for 3 pages and Asperger's for 2 pages, the total pages devoted is 5)	
- Pervasive developmental disorder not otherwise specified (PDD-NOS): - Autism: - Asperger syndrome: - Rhett syndrome: - Childhood disintegrative disorder (CDD): - Mental retardation: - Intellectual disabilities:	IF it is discussed - Formatting of those pages/slides (single, double spaced, etc.) _____ - Page/Slide Number(s) of the manual: IF there is no section, indicate this topic is Not Applicable
Does the manual discuss other mental health disorders other than ASD or PDDs?	Yes (explicit), Yes (Implicit), No, Not Applicable i. If Yes (explicit), please list them

	Page/Slide Number(s) of manual:

Content Questions	
Does the manual distinguish between *mental illness* and *developmental disorders*	Yes (explicit), Yes (Implicit), No, Not Applicable i. If Yes (explicit), please write the definition ii. Page/Slide Number(s) of manual:
Does the manual define 'impairment'?	Yes (explicit), Yes (Implicit), No, Not Applicable i. If Yes (explicit), please write the definition Page/Slide Number(s) of manual:
Disorder Questions	
Does the manual define Pervasive Developmental Disorders (PDDs) OR Developmental Disorders?	Yes (explicit), Yes (Implicit), No, Not Applicable i. If Yes (explicit), please write the definition Page/Slide Number(s) of manual:
Does the manual reference any professional, clinical or scholarly source(s) in their descriptions of PDDs, DDs, or ASD	Yes (explicit), Yes (Implicit), No, Not Applicable i. If Yes (explicit), please write: a. The source(s) used (write as either scholarly journal, advocacy group, government publication, etc.): b. The developmental disorder the source references Page/Slide Number(s) of manual:

Autism Specific Content Questions	
Does the manual define autism?	Yes (explicit), Yes (Implicit), No, Not Applicable If Yes (explicit/implicit) please write the definition: Page/Slide Number(s) of manual:
Does the manual specifically discuss that autism is a neurological or cognitive based developmental disability?	Yes (explicit), Yes (Implicit), No, Not Applicable Page/Slide Number(s) of manual:

Does the manual discuss uniqueness of autism? In that each individual diagnosed with autism is different, diagnosed at different levels of functioning?	Yes (explicit), Yes (Implicit), No, Not Applicable Page/Slide Number(s) of manual:
Does the manual specifically separate issues of high-functioning autistics contrasted to low-functioning autistics?	Yes (explicit), Yes (Implicit), No, Not Applicable Page/Slide Number(s) of manual:
Does the manual clearly discuss that Autism, ASD, and PDD cannot be managed by medication?	Yes (explicit), Yes (Implicit), No, Not Applicable Page/Slide Number(s) of manual:
Does the manual list behavioral characteristics of individuals with ASD?	- Lack of eye contact: pg/slide __ - Sensory issues: pg/slide__ - Communication issues such as non-verbal: pg/slide___ - Lack of empathy or shared perspective: pg/slide __ - Processing delays: pg/slide___ - Stimming: pg/slide___ - Issues with social interaction: pg/slide __ - Repetitive behaviors: pg/slide __ - Changes in mood/affect: pg/slide __ - Resistant to change in routine: pg/slide __ - Comprehension issues of social norms/cues: pg/slide___ - 'Echolalia' (parrot back words/phrases said to/around them): pg/slide___ - Not Applicable
Does the manual discuss 'stimming'?	Yes (explicit), Yes (Implicit), No, Not Applicable Page/slide Number(s) of manual:

Police	
Does the manual discuss the importance of officers' behavior while interacting with individuals who have ASD/PDD? (i.e. allowing the individual time to process what the officer is saying, keeping their voices/tone calm, body language, etc.)	Yes (explicit), Yes (Implicit), No, Not Applicable Page/slide Number(s) of manual:

Does the manual discuss that touching an individual with ASD can escalate a situation?	Yes (explicit), Yes (Implicit), No, Not Applicable Page/slide Number(s) of manual:
Does the manual have a section listing available services/facilities that officers may transport an individual to divert them from jail?	Yes (explicit), Yes (Implicit), No, Not Applicable Page/slide Number(s) of manual: List facilities/services:
Does the manual explicitly state that if the officer is aware or suspects that an individual has Autism, ASD, or PDD and they are to placed in jail that they should be segregated from the rest of the jail population?	Yes (explicit), Yes (Implicit), No, Not Applicable Page/slide Number(s) of manual:
Does the manual discuss communication techniques for officers making contact with an individual with Autism, ASD, or PDD?	Yes (explicit), Yes (Implicit), No, Not Applicable Page/slide Number(s) of manual: List techniques:
Does the manual discuss deescalation techniques for officers to use *specifically* with an individual with Autism, ASD, or PDD?	Yes (explicit), Yes (Implicit), No, Not Applicable Page/slide Number(s) of manual: List techniques:
Does the manual include role-play exercises?	Yes (explicit), Yes (Implicit), No, Not Applicable Page/slide Number(s) of manual:
Does the manual address any inherent personal biases or barriers (ex. cynicism) that may influence officers? - Cynicism - Stereotypes of autism (i.e. the *Rain Man*) - Fear of mental illness/disorders - Other:	Yes (explicit), Yes (Implicit), No, Not Applicable Page/slide Number(s) of manual:
Does the manual enforce the *warrior mindset* or the *social service mindset*?	Warrior, Social, Neither, Both, Not Applicable Page/slide Number(s) of manual:
Does the manual list/discuss/mention the goals or actions taken by PERF (Police Executive Research Forum)?	Yes (explicit), Yes (Implicit), No, Not Applicable Page/slide Number(s) of manual:

Other comments:

Table 4. States and De-Escalation Techniques

De-Escalation Techniques	
State	Techniques
Maryland	• move to where the subject can see you and use an open stance • avoid crowding the subject to the extent possible • control distance and maintain bailout routes • use your given name rather than a title • learn and use in the individual's name • encourage talking/be empathetic/use non-judgmental approach • be supportive/increase feedback/offer choices • use calming object or unusual calming approach (i.e. deep breathing) • speech (tone/rate of speech) • body language (physical space) • reflective listening • reassurance (verbal and non-verbal cues)
Massachusetts	• maintain a safe distance • be aware of objects that could be dangerous • model calming body language and behavior • if possible turn off sirens and flashing lights, and remove canine partners
Michigan	• Verbal cues of potential violence – loud voice, profanity, threatening words, angry tone, responding to internal stimuli • Non-verbal cues for potential violence – red flushed face, hyperventilation, shaking, clenched fists, rigid body, fixed stare, hesitation to move as commanded

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