EXPERIENCE AUTISM: EFFECTIVENESS OF AN AUTISM TRAINING PROGRAM FOR LAW ENFORCEMENT OFFICERS

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ABSTRACT

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Autism spectrum disorder (ASD) is characterized by deficits in social interaction and social communication skills. High ASD prevalence rates have increased public concern about how persons diagnosed with the disorder will interact with others in their communities. Police officers routinely interact with people diagnosed with a variety of disabilities and mental illnesses. Current law enforcement training includes a broad focus on mental illness that may not be sufficient to prepare law enforcement officers to interact with persons diagnosed with ASD. The present study evaluated the effectiveness of a privately-owned ASD training program developed for law enforcement officers. A total of 195 police officers participated in this study during 3 separate training events at 2 police departments in Southern California. Results showed a significant increase in participants' knowledge of core ASD symptoms in 4 out of 6 program training modules. In addition, participants reported gains in the following domains: perceived confidence in interacting with persons with ASD, perceived practicality of providing accommodations for people diagnosed with ASD, and perceived relevance to participants' work as police

officers. The implications of these findings are discussed and recommendations are made regarding future presentations of the training and future areas of research.

Keywords: Autism, law enforcement, training, mental health

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DEDICATION

To Josue Medina, my little brother and undercover superhero. You opened my eyes and my heart to embracing differences.

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Over the past four years, I have received unwavering support and encouragement from a great number of individuals, many of them far more hopeful than I about me achieving this milestone. It is humbling and a joy to acknowledge those who have enabled me to do what I formerly thought to be impossible. First and foremost, I would like to thank God for lending me strength and opening unimaginable doors. I would also like to thank my wonderful dissertation committee, Dr. Tania Abouezzeddine and Dr. Stacy Eltiti, for their guidance, insight, and encouragement as I moved from an idea filled with purpose and hope to a completed study. I could not have asked for more inspiring or dedicated mentors! Your counsel helped me gain the initial confidence and skill I needed to conduct this research project which means so much to me.

This dissertation would not have been possible without the remarkable work of Emily Iland, creator of *Experience Autism*, and her passion for training and advocacy. Her willingness to evaluate the effectiveness of her program made it possible to embark on this rewarding journey. It is my hope that her work will continue to positively impact our communities and empower our loved ones who are within the Autism Spectrum. In addition, I would like to extend my heartfelt gratitude and appreciation to the incredible men and women serving in our police departments for their concerted effort and endeavors in protecting all the magnificently diverse members of our communities. In particular, I would like to thank the two police departments that participated so generously in our study and demonstrated such admirable commitment to service.

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CHAPTER 1

REVIEW OF THE LITERATURE

Introduction

Early American and European epidemiologic studies conducted between the 1960s and the 1980s focused primarily on more severe presentations of autism spectrum disorder (ASD), thus promoting the belief that ASD was a rare disorder affecting only 1 in every 2,000 (0.05%) children (Fombonne, 2009; Rutter, 2005). However, further research conducted in the 2000s have estimated that 1% to 2% of children meet criteria for ASD (Blumberg et al., 2013; Lai, Lombardo, & Baron-Cohen, 2014; Schieve et al., 2012). This noteworthy increase in the diagnosis of ASD over the last few years has led to increased media coverage and public concern around the etiology, prevalence, and treatment of ASD (Autism and Developmental Disabilities Monitoring Network [ADDM], 2014).

More recently, the Autism and Developmental Disabilities Monitoring Network (ADDM, 2014), a group of programs funded by the Center for Disease Control and Prevention, began collecting data from 11 communities across the United States to estimate the number of U.S. children with ASD and other developmental disabilities. Results from the ADDM study indicated that the overall prevalence of ASD was 1 in 68 children who were 8 years of age. Although this is only an estimate of the actual number of children in the United States who qualify for a diagnosis of ASD, there is a clear trend

of more children being diagnosed with ASD than ever before. Studies suggest that this recent increase in prevalence is likely attributable to a broadened definition of ASD, improved diagnostic practice, greater service availability, and increased public awareness (ADDM, 2014; Schieve et al., 2011).

Due to the increased identification and prevalence of ASD throughout the United States, it is important to understand the impact that this disorder has on individuals and their ability to interact with others in their environment. The fifth edition of the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-5), the main diagnostic manual used by psychologists and psychiatrists in the United States, characterizes autism as fundamental and persistent deficits in reciprocal social interactions and social communication skills in addition to highly restricted and repetitive patterns of behavior, interests, and activities (American Psychiatric Association, 2013). Studies have demonstrated that these core symptoms of ASD may make it difficult for autistic individuals to understand the legal ramifications of certain behaviors, which may lead them to unknowingly break the law (Mayes, 2003; Woodbury-Smith et al., 2005). Additionally, persons with developmental disabilities, including ASD, are reported to be at an increased risk of being abused partly due to their impaired social functioning (Petersilia, 2001; Sevlever, Roth, & Gillis, 2013). Given the nature of their social impairments, it is reasonable to believe that persons with ASD as well as other disabled and symptomatic populations might come in contact with law enforcement officers.

In fact, law enforcement officers are the first line of response in a variety of emergency situations and interact with culturally, physically, and psychologically diverse populations on a daily basis (Steadman, Deane, Borum, & Morrissey, 2000; Teplin &

Pruett, 1992). Two studies in particular have estimated that between 3.7% (Engel & Silver, 2001) and 7.9% (Teplin, 1984) of all police encounters involve persons with severe impairments and mental health concerns. Additionally, a survey investigating the average percentage of mental health emergency calls received by law enforcement agencies revealed that mental health emergencies constitute 4% to 9% of the calls that California receives each month (Husted, Charter & Perrou, 1995). Importantly, the same study found that these percentages only represented the most severely symptomatic offenders. It is currently unclear what percentage of calls were related to less severe disorders (e.g., autism), but the researchers suggest that the percentage was likely high.

Given the frequency of such encounters, mental health-related training for law enforcement officers might be considered a good investment of time and funds. This is especially true when one considers the benefit of knowledge about severe mental health symptomatology in the general population. For instance, it has been demonstrated that people in the healthy, general population are more likely to offer interpersonal help and less likely to avoid people with a psychiatric diagnosis if they have personal experience or knowledge of mental illness (Corrigan, Markowitz, Watson, Rowan, & Kubiak, 2003). Conversely, lack of knowledge regarding mental illness can contribute to negative attitudes towards people with mental illness (Wolff, Pathare, Craig & Leff, 1996). Thus, training about mental illness is an appropriate step both to reduce inherent and prevalent individual prejudice towards persons with mental illness and to foster greater willingness within others to help this population.

Many law enforcement departments across the country have chosen to broadly train their officers on how to handle severe mental illness. Research shows that

experiencing less negative emotions towards mentally ill offenders can be a desirable outcome for law enforcement officers who interact with these individuals during periods of high stress and illegal behaviors (Corrigan et al., 2003; Debbaudt, 2002). Current training programs aim to increase awareness of key features of severe mental illness to help officers develop skills to de-escalate any dangerous behaviors exhibited by distressed, mentally-ill persons (Compton, Bahora, Watson & Oliva, 2008).

One such program, the Crisis Intervention Team (CIT), is a police-based intervention that promotes interaction between police officers and individuals with mental illnesses and attempts to improve officer and offender safety during mental health-related emergencies (Compton & Chien, 2008). While CIT is not a state requirement, many police departments throughout the United States have chosen to participate in the program, and research on the outcomes of such participation has been positive (Compton, Esterberg, McGee, Kotwicki & Oliva, 2006; Teller, Munetz, Gil & Ritter, 2006). In fact, a large national study reported high satisfaction and content-usefulness ratings from CIT program participants after the completion of their program (Borum, Deane, Steadman & Morrissey, 1998). Overall, there is strong evidence for the use of the CIT program as a model to train law enforcement officers about major mental illness.

However, current law enforcement training programs on mental illness may have several limitations. The available training programs may not be accessible to all law enforcement personnel due to the lengthy time commitments involved. For example, the CIT program requires a 40-hour training commitment from police officer volunteers (Teller et al., 2006). Given the large time commitment, many officers may choose to

comply with the minimum training requirements in their state. In California, only six sheriff departments and 77 police departments out of 158 law enforcement agencies reported in-service training on interacting with mentally ill persons, with a median training duration of 1 hour (Husted et al., 1995). Importantly, these models of training do not focus on a single topic, such as autism, but encompass a variety of mental disorders. As a result, research also suggests that law enforcement officers may not be able to easily identify the deficits associated with less severe manifestations of mental illness and developmental disabilities, such as the social interaction and communication impairments experienced by people diagnosed with autism (Mayes, 2003; Modell & Mak, 2008).

This lack of training in ASD is a reason for concern. Prevalence rates for ASD are high (ADDM, 2014) and individuals with ASD face unique challenges in navigating their worlds. News media often reports negative or tragic interactions between law enforcement officers and persons with ASD (Cheely et al., 2012). Some tragedies, such as the shooting of Paul Childs by Colorado police officers, have even led to state legislation in support of specialized training on interacting with the mentally ill (Osborn, 2008). Although steps have been taken to properly train law enforcement officers, research in California uncovered that 80% of police officers were unable to identify core features of ASD (Modell & Mak, 2008). Though research has shown that police training is effective in improving law enforcement officers' knowledge and skills in working with people diagnosed with mental illnesses (Compton & Chien, 2008; Compton et al., 2006), little research has been conducted on the effectiveness of law enforcement training on ASD.

One reason limited research exists on the topic of ASD training effectiveness is that there are few programs that offer this specialized training material. Teagardin, Dixon, Smith, and Granpeesheh, (2012) conducted a study with law enforcement officers to evaluate the effectiveness of a 13-minute training video designed to teach officers how to identify behaviors and deficits in persons with ASD. Officers were randomized to two conditions, an active training treatment group or a delayed training control group. A brief questionnaire based on the training video material was used as both a baseline and an outcome measure for each group. Participants were asked to rate their confidence in identifying and interacting with persons with ASD using a Likert scale. While improvements were shown in both increased knowledge and confidence in identifying and interacting with persons with ASD, the study concluded that the post-training scores did not suggest mastery of the material as most post-training scores fell below 54% correct (Teagardin et al., 2012). The study suggested that the low scores might be due to the brevity of the educational video and the lack of a live instructor. This claim is supported by research that found that standardized training, such as video instruction, may not be as effective as in-person training methods (Granpeesheh et al., 2010).

The present study aimed to evaluate the effectiveness of *Experience Autism*, a privately-owned ASD program designed for law enforcement officers (Iland, 2017). The training program includes live instruction by trained civilian and law enforcement-affiliated facilitators. It also incorporates six training modules in which participants engage in simulations of core ASD features. These activities were developed to encourage perspective-taking and cultivate empathy.

The current study examined the impact of *Experience Autism* training on law enforcement officers' knowledge of core ASD impairments. In addition, it examined the training's impact on the following domains: perceived knowledge about ASD, perceived confidence in interacting with persons with ASD, perceived practicality of providing accommodations to people diagnosed with ASD, perceived "dangerousness" or threat posed by a person diagnosed with ASD, level of nervousness in interacting with someone exhibiting common symptoms of ASD, and willingness to accept help from a caregiver in a situation involving someone with a potential diagnosis of ASD. Participants were also asked to rate the following: the station they found most useful, the relevance of the training program to their work as police officers, and the helpfulness of the training program in increasing their preparedness to interact with people diagnosed with ASD.

It was hypothesized that all training modules would significantly improve knowledge of ASD. It was also expected that training would contribute to positive changes in the aforementioned domains as evidenced by significant improvements between pretest and posttest scores. Lastly, it was anticipated that police officers would find that training was relevant to their work and that the majority of participants would feel more prepared to interact with this population in the future.

CHAPTER 2

METHOD

Participants

Participants for this study were recruited from three *Experience Autism* training events at two Southern California police departments. The training events took place in March and June 2015 and were credited by Station Command towards required training hours for law enforcement participants. Commanding officers at each site informed participants that while attending the training itself was mandatory, participation in the research portion of the training was voluntary. All law enforcement officers were instructed by their Command to leave research measures blank if they chose not to participate in the study. Instructions were also repeated by our research team at the time of training.

Informed consent was collected prior to the start of the training. Participants who voluntarily participated in all parts of the research were entered into a drawing to win one of six $50 Amazon gift cards. Participants were informed that any identifying information used to contact raffle winners would not be connected to their individual responses. Participants had to be currently employed by the police department hosting the event. No other exclusion criteria were used for this study. Researchers delivered gift cards to the participating police departments in June of 2016 and, per agreement with leadership, left them to be distributed by police staff not associated with Command.

A total of 195 law enforcement officers participated in this study with some choosing to complete only part of the study and others participating in the entire assessment protocol (see Materials and Procedures sections). About 131 participants consistently provided demographic information, including data about their gender and ethnicity (see Table 1). Participants also reported whether or not they were (a) closely acquainted with persons diagnosed with ASD outside of work, (b) had interacted with individuals with ASD during the course of their police work, and (c) had received previous training on ASD. In addition, participants reported between 6 months and 41 years of work experience in law enforcement (*M* = 12.75 years, *SD* = 7.99).

Table 1

Selected Demographic Variables

Descriptive		*n*	%
Gender			
	Male	109.	83.2
	Female	22.	16.8
Ethnicity			
	Caucasian/European American	73.	55.7
	Black/African American	7.	5.3
	Hispanic/Latino(a)	33.	25.2
	Asian/Asian American	6.	4.6
	Native American/Alaskan Native	3.	2.3
	Other[a]	9.	6.9
Contact with ASD persons			
	Outside of work	28.	21.4
	During work	114.	87.0
Previous ASD training		45.	34.4

Note. [a] Of the 9 participants who selected *Other*, two participants identified as Filipino and seven as mixed race.

Out of 131 participants who provided demographic information, a small subset of 70 participants completed the majority of measures collected during the training. The

demographic information and reported levels of exposure to ASD for this subset of individuals are presented in Table 2 and Table 3.

Table 2

Number and Percentage of Responses by Selected Demographic Variables

Descriptive	*N*	%
Gender		
Male	61.	87.1
Female	9.	12.9
Ethnicity		
Caucasian/European American	45.	66.2
Black/African American	3.	4.4
Hispanic/Latino(a)	12.	17.6
Asian/Asian American	3.	4.4
Native American/Alaskan Native	3.	4.4
Other	2.	2.9
Years in Force		
0-5 Years	6.	8.8
6-10 Years	22.	32.4
11-15 Years	19.	27.9
16-20 Years	8.	11.8
21-25 Years	6.	8.8
26-30 Years	4.	5.9
31+ Years	3.	4.4
Job in Force		
Administrative	5.	7.4
Detective	8.	11.8
Patrol	34.	50.0
School	1.	1.5
Special Unit	4.	5.9
Supervisory	10.	14.7
Traffic	6.	8.8

Table 3
Reported Levels of Exposure to ASD

Descriptive	*n*	%
Know ASD diagnosed person outside of work?		
Yes	9 .	12.9
No	61.	87.1
Interacted with ASD diagnosed person during work?		
Yes	66.	94.3
No	4.	5.7
Received ASD training before?		
Yes	24.	34.3
No	46.	65.7

Materials

Two types of measures were developed to assess the effectiveness of *Experience Autism* both in increasing law enforcement officers' awareness of ASD and in contributing to their ability to interact with persons diagnosed with ASD. The Global Pre and Posttests (see Appendix A) included questions specific to this study as well as questions related to the research of two other graduate students affiliated with the research team. Only the results directly associated with this study have been presented in this dissertation. The In-Station Pre and Posttests (see Appendix B) were questionnaires developed for this project and did not contain any questions associated with any other research.

Global *Experience Autism* Pretest and Posttest

The Global *Experience Autism* Pretest and Posttest were administered to broadly measure knowledge about ASD. Each measure included 21 true-or-false statements addressing general facts about ASD and were scored by adding the number of correct

responses. Each correct item contributed 1 point to the total score. In addition, these Global measures contained four questions asking officers to rate their perceptions of the following categories before and after training: perceived knowledge about ASD, perceived confidence in interacting with persons with ASD, perceived practicality of providing accommodations to people diagnosed with ASD, and perceived "dangerousness" or threat posed by a person diagnosed with ASD.

The Global Pre and Posttests also presented a vignette about an ambiguous situation involving an individual exhibiting some behaviors commonly associated with persons diagnosed with ASD (e.g., self-stimulatory behavior). Participants were asked to rate their confidence in handling the situation, their knowledge of how to make accommodations for the individual, their nervousness about the situation, and their willingness to accept help from someone claiming to be the individual's caregiver. The Global Posttest included four additional questions asking participants to rate or identify the following: the station they found most useful, the relevance of the training program to their work as police officers, and the helpfulness of the training program in increasing their preparedness to interact with people diagnosed with ASD.

In-Station Pretest and Posttest

The In-Station Pre and Posttests were developed to assess participants' knowledge of core ASD symptoms before and after each of the six training modules. These measures consisted of eight true-or-false statements that assessed knowledge about the target impairment or suggested intervention taught in each specific module. The pretest and the posttest for each module contained identical, module-specific statements for participants

to answer. Each measure was scored by adding the number of correct responses out of eight items. These measures were designed to be easily completed in 1 minute or less. This was done to address feedback from department administrators that officers generally disliked completing evaluation forms and were more likely to do so if the form was short.

Procedure

Experience Autism is an Autism awareness program developed by Emily Iland, M.A. to train law enforcement officers (Iland, 2017). The presentation of *Experience Autism* has been modified multiple times to address the needs of individual law enforcement agencies. The structure utilized for this study included a brief introduction by Ms. Iland, six distinct 25-minute training modules, and a wrap-up lecture also administered by Ms. Iland. The duration of each training event was approximately four hours, with the majority of the time dedicated to completing the training modules.

Each module engaged participants in an activity designed to increase understanding about specific core ASD impairments (see Table 4) and was led by community volunteers and law enforcement officers. Ms. Iland designed the simulation activities to help officers understand what different features of ASD feel like and to encourage the development of empathy as police officers take the perspective of those with ASD. Facilitators were trained by Ms. Iland during specialized didactics with built-in roleplays, live supervision, and feedback. Co-facilitators used a manualized script written by Ms. Iland to guide the training. Other volunteers with no speaking roles were also present to help with the set-up and clean-up of activities as well as the collection of pre/posttests.

Table 4

Description of Module Activities and Targeted Impairments

Module Name	Activity Description	Target Impairment
Clip It	Officers attempt to attach paperclips and binder clips to notecards while wearing oven mitts.	Fine motor impairments, differences in touch sensitivity, and motor manipulation skills
Write On	Officers attempt to write their first name with a crayon on a sticky note stuck to their forehead	Differences in processing information to carry out a simple task
The Envelope, Please	Officers receive an envelope with instructions and must follow the written directions	Social impairment and problems reading social cues
Say What?	Officers attempt to provide a verbal response to a question while following specific instructions about how to format their answers (e.g., do not use the letter "a" in your response)	Delays in language processing or expressive language
Chaos	Officers are exposed to stimuli meant to stimulate sensory overload	Problems coping with sensory overload
Do You Read Me?	Officers are asked to interpret a person's mood or intent while the person is wearing a distorted clear plastic mask	Impairment in non-verbal communication including problems interpreting facial expressions and body language

At each training event, the *Write On* and *The Envelope, Please* modules were administered to all participants at one time as a large group. The rest of the modules required participants to be randomly divided into smaller groups of 15 to 20 people. This distribution was due to available space and departmental workflow logistics. Following

the initial activity in each module, the volunteer civilian facilitators discussed how the activity was related to the target impairment in that module. Police officer co-facilitators then followed scripted guidelines to explain how the ASD impairment might appear in the field (e.g., fine motor impairments may prevent an individual with ASD from producing identification in a timely manner). In addition, police officer facilitators shared tips on how to make accommodations for people with ASD (e.g., allow an individual with ASD more time to comply with instructions). At the end of the module, participants were invited to ask questions from both facilitators.

Consent for participation in the research portion of the protocol was collected at the beginning of each training event during the introduction provided by Ms. Iland. Participants were told that the research protocol consisted of short questionnaires to be administered before and after every module in addition to lengthier assessments to be distributed after the brief introduction and at the end of the event. Participants who did not wish to participate in any part of the research portion of the program were instructed by Command and the research team to leave the measures blank or to cross out the entire page. Those who chose to participate were allotted 2-3 minutes to complete the brief In-Station tests and 30-40 minutes to complete the Global tests. All participants were instructed to leave their blank or completed measures facedown on the table to be collected by volunteers. Participants had the ability to choose which assessments they wanted to complete at any point during the training. This resulted in some participants completing all components of the protocol (i.e., Global Prettest, Global Posttest, and all In-Station Pre and Posttests) and others choosing to participate only in select parts of the assessment.

I served as a trainer for the *Clip It* module during both training events. In order to minimize research bias as well as threats to privacy and confidentiality, I consented participants in large groups, collected completed measures in no particular order, had volunteers assist with the collection of these measures, and asked research assistants to randomly select the six raffle winners.

CHAPTER 3

RESULTS

Paired-samples *t* tests were conducted for each of the six modules to determine if police officers' knowledge of the targeted ASD impairments increased after participation in the training modules. There was a significant increase in participants' knowledge at posttest compared to pretest for the following modules: *Clip It*, $t(161) = -3.72$, $p < .001$, $\eta^2 = .079$; *Say What?*, $t(156) = -4.66$, $p < .001$, $\eta^2 = .12$; *Do You Read Me?*, $t(155) = -5.77$, $p < .001$, $\eta^2 = .18$; and *Chaos*, $t(159) = -2.32$, $p = .022$, $\eta^2 = .03$. However, there was no difference in participants' pretest vs. posttest scores for either the *Write On*, $t(140) = -1.44$, $p = .153$, $\eta^2 = .01$, or *The Envelope, Please* modules, $t(154) = 1.28$, $p = .202$, $\eta^2 = .01$. Means, standard deviations, and 95% CIs for each module's pretest and posttest are presented in Table 5.

Paired-samples *t* tests were also run to analyze a variety of potential gains associated with participation in the entire training program. These tests aimed to identify any significant increases at Global Posttest compared to Global Pretest in the following domains: broad knowledge about ASD, self-reported knowledge of ASD, confidence in interacting with people with ASD, and perceived practicality of providing accommodations for people with ASD in the field. Police officers demonstrated a significant increase in the number of items correctly answered in the knowledge portion of the Global assessments, reflecting an increase in their broad knowledge about ASD after the training, $t(69) = -2.22$, $p = .03$, $\eta^2 = .07$. After completion of the training, police

officers also reported an increase in their perceived knowledge about ASD, $t(69) = -10.38$, $p < .001$, $\eta^2 = .61$, as well as an increase of confidence in their ability to interact with people with ASD, $t(69) = -6.87$, $p < .001$, $\eta^2 = .41$. After the training, police officers also showed a significant increase in their belief that it was practical to provide accommodations to people with ASD in the field, $t(68) = -3.91$, $p < .001$, $\eta^2 = .18$. Means, standard deviations, and 95% CIs for these tests are presented in Table 6.

Table 5

Mean, Standard Deviations, and 95% Confidence Intervals for Pretest and Posttest Assessments by Module

		Pretest		Posttest	
Module Name	*n*	*M* (*SD*)	95% CI [*LL*, *UL*]	*M* (*SD*)	95% CI [*LL*, *UL*]
Clip It	162	7.61 (0.81)	[7.49, 7.74]	7.82 (0.52)	[7.74, 7.90]
Write On	141	7.12 (1.32)	[6.90, 7.34]	7.27 (1.07)	[7.09, 7.45]
The Envelope, Please	155	7.20 (0.95)	[7.05, 7.35]	7.09 (1.26)	[6.89, 7.29]
Say What?	157	5.59 (0.93)	[5.44, 5.73]	5.99 (0.99)	[5.83, 6.14]
Chaos	160	6.96 (1.21)	[6.77, 7.15]	7.18 (0.87)	[7.05, 7.32]
Do You Read Me?	157	6.85 (1.17)	[6.67, 7.04]	7.37 (0.80)	[7.24, 7.49]

Note. CI = confidence interval; *LL* = lower limit; *UL* = upper limit.

Table 6

Mean, Standard Deviations, and 95% Confidence Intervals for Specific Domains in the Global Pretest and Posttest

		Pretest		Posttest	
Descriptive	N	*M* (*SD*)	95% CI [*LL*, *UL*]	*M* (*SD*)	95% CI [*LL*, *UL*]
Actual Knowledge	70	17.69 (2.00)	[17.21, 18.17]	18.40 (2.89)	[17.71, 19.09]
Perceived Knowledge	69	2.14 (0.67)	[1.98, 2.30]	2.55 (0.58)	[2.41, 2.69]
Confidence	70	2.16 (0.63)	[2.01, 2.31]	2.76 (0.60)	[2.62, 2.90]
Practicality	70	1.73 (0.66)	[1.57, 1.89]	2.66 (0.70)	[2.49, 2.83]

Note. CI = confidence interval; *LL* = lower limit; *UL* = upper limit.

A Pearson's chi-squared test was also conducted to examine whether or not participants believed people with ASD were dangerous. Even at pretest, most police officers thought that people with ASD were not dangerous (see Table 7). Out of the five police officers who thought that people with ASD were dangerous, two changed their minds at posttest. Three individuals continued to hold this belief even after completion of the training.

Table 7

Pearson's Chi-Square for "Dangerousness"

			Posttest		
			Yes	No	Total
PreTest					
	Yes		3	2	5
		% within PreTest	60	40	100
		% within Posttest	100	3	7
	No		0	65	65
		% within PreTest	0	100	100
		% within Posttest	0	97	93
Total			3	67	70

Participants also responded to questions assessing their satisfaction with the *Experience Autism* program. Specifically, police officers were asked to rate how relevant they believed the training was to their work, whether they felt more prepared to interact with individuals with ASD, and what they perceived to be the most helpful module (see Table 8). Most participants reported the training to be moderately or highly relevant to their work as police officers. The vast majority also indicated that the training made them feel more prepared to interact with people diagnosed with ASD. In addition, a large number of participants found all modules to be helpful and many highly favored *Say What?* and *Chaos.* Only 1 of the 53 participants who answered the question thought none of the modules were helpful.

Table 8

Satisfaction with Training

Descriptive	*n*	%
How relevant was training to your work?		
Not Relevant	2	2.9
Slightly Relevant	6	8.7
Moderately Relevant	27	39.1
Highly Relevant	34	49.3
Do you feel more prepared after training?		
Yes	65	95.6
No	3	4.4
What module was most helpful?		
Clip It	4	7.5
Write On	1	1.9
The Envelope, Please	0	0.0
Say What?	12	22.6
Chaos	11	20.8
Do You Read Me?	8	15.1
All Modules	13	24.5
Wrap-Up	3	5.7
None	1	1.9

The responses to the vignette presented on both the Global Pretest and Posttest were also analyzed using paired-samples *t* tests. The vignette asked participants to rate their confidence in handling the situation presented, their perceived knowledge about how to make accommodations for the individual in the vignette, and their level of nervousness about the situation. Police officers reported that their confidence in handling the situation increased after training compared to before training, $t(67) = -2.28$, $p = .026$, $\eta^2 = .07$. They also reported that their knowledge of how to make accommodations in the given scenario increased after the training, $t(68) = -3.80$, $p < .001$, $\eta^2 = .18$. Finally, they

reported that their nervousness or anxiety around the scenario decreased after completion of the training, $t(68) = 4.06$, $p < .001$, $\eta^2 = .19$. Means, standard deviations, and 95% CIs for these tests are presented in Table 9.

Table 9

Mean, Standard Deviations, and 95% Confidence Intervals for the Vignette in the Global Pretest and Posttest

		Pretest		Posttest	
Descriptive	*n*	*M* (*SD*)	95% CI [*LL*, *UL*]	*M* (*SD*)	95% CI [*LL*, *UL*]
Confidence	68	2.68 (0.61)	[2.53, 2.83]	2.88 (0.59)	[2.74, 3.02]
Accommodation	69	2.42 (0.58)	[2.28, 2.56]	2.74 (0.61)	[2.59, 2.89]
Nervousness	69	2.10 (0.88)	[1.89, 2.31]	1.78 (0.70)	[1.61, 1.95]

Note. CI = confidence interval; *LL* = lower limit; *UL* = upper limit.

In addition, participants were asked in the vignette whether they would accept the help of a caregiver during the situation. A Pearson's chi-squared test was used to analyze the responses. Even before training, most police officers were willing to accept help in the given situation (see Table 10). Only two people selected "no" at pretest, and one of these individuals switched to "yes" after the training.

Table 10

Pearson's Chi-Square for Accepting Help

			Post Test		
			Yes	No	Total
PreTest	Yes		65	0	65
		% within PreTest	100	0	100
		% within Posttest	99	0	97
	No	Count	1	1	2
		% within PreTest	50	50	100
		% within Posttest	2	100	3
Total		Count	66	1	67

Exploratory analyses were also conducted on the Global Pretest and Posttest to summarize existing data characteristics, formulate new areas of inquiry, and inform future data collection. Mixed factorial ANOVA was used to investigate the impact of training (using pretest and posttest as time points) on the following dependent variables: broad knowledge about ASD (i.e., *global knowledge*), perceived practicality of providing accommodations to individuals diagnosed with ASD (i.e., *practicality*), and vignette-related dependent variables (DVs). Vignette-related DVs were confidence in handling the presented situation (i.e., *confidence*), perceived knowledge to make accommodations for the individual in the vignette (i.e., *perceived knowledge*), and level of nervousness about the situation (i.e., *nervousness*). The mixed factorial ANOVA also provided information about whether the impact of the intervention differed between participants based on demographic characteristics including job type, years in force, gender, ethnicity, relationship to someone diagnosed with ASD outside of work, previous training in ASD, and interaction with individuals with ASD during work.

Tables 11 to 17 present the findings from these analyses organized by the second independent variable: demographic characteristics. Statistically significant findings or those representing trends toward significance are bolded within the tables. In general, for each demographic characteristic there were significant main effects for time on the various DVs. Other relevant findings are presented in the paragraphs to follow.

For job type, there was a significant interaction between job type and time, $F(5, 60) = 2.65$, $p = .031$, $\eta^2 = .18$. A simple effects analysis was conducted as a follow-up, and results showed a significant increase in knowledge of how to make accommodations post-training compared to pre-training for officers assigned to administrative positions, $F(1, 60) = 11.47$, $p < .001$, $\eta^2 = .16$, and to supervisory positions, $F(1, 60) = 11.24$, $p < .001$, $\eta^2 = .16$. There was also a significant main effect for gender, $F(1, 68) = 6.77$, $p = .01$, $\eta^2 = .09$, but it must be noted that the sample size was small ($n = 9$).

For ethnicity, a trend towards significance emerged for an interaction between time and ethnicity on confidence, $F(5, 60) = 2.29$, $p = .06$, $\eta2 = .16$. A simple effects analysis indicated a significant difference in confidence for White participants, $F(1, 60) = 5.43$, $p = .02$, $\eta2 = .08$ and for Native American participants, $F(1, 60) = 10.29$, $p = .002$, $\eta2 = .15$, both of which had small sample sizes (n= 43 and 3, respectively). When it came to Perceived Knowledge, there was a significant main effect for ethnicity, $F(5, 61) = 2.67$, $p = .03$, $\eta2 = .18$; thus, a Fisher's LSD with Bonferroni correction was conducted. This test resulted in the following: White participants self-reported having greater perceived knowledge to make accommodations compared to both Black participants (*Mean Difference [MD]* = 0.65, $p = .02$), and Asian participants (*MD* = .65, $p = .02$); Native American participants self-reported having greater perceived knowledge to make

accommodations compared to both Black participants (*MD* = 0.83, *p* = .03), and Asian participants (*MD* = 0.83, *p* = .03); and "Other" participants self-reported having greater perceived knowledge to make accommodations compared to both Black participants (*MD* = 1.00, *p* = .02), and Asian participants (*MD* = 1.00, *p* = .02).

For previous training in ASD, the between-subjects effect comparing ASD training was significant, $F(1, 66) = 4.44$, $p = .04$, $\eta^2 = .06$. A simple effects analysis was conducted as a follow-up, and results showed that participants without previous ASD training reported a significant increase in confidence at post-training compared to pre-training, $F(1, 66) = 9.69$, $p = .003$, $\eta^2 = .13$. However, participants who had previous ASD training reported no significant difference in their level of confidence at post-training compared to pre-training, $F(1, 66) = .08$, $p = .78$, $\eta^2 = .001$.

Regarding confidence, there was also a significant interaction between previous training and time, $F(1, 66) = 4.30$, $p = .04$, $\eta^2 = .06$. A follow-up simple effects analysis showed that if participants did not have previous ASD training then their confidence increased after the current training, $F(1, 66) = 4.30$, $p = .04$, $\eta^2 = .06$. Lastly, for perceived knowledge, there was a significant interaction between previous training and time, $F(1, 67) = 4.42$, $p = .04$, $\eta^2 = .06$. A simple effects analysis indicated that if participants did not have previous ASD training, then their knowledge to make accommodations increased after the current training, $F(1, 66) = 19.51$, $p < .001$, $\eta^2 = .23$. However, if participants did have previous ASD training, then their knowledge to make accommodations did not significantly increase after the current training, $F(1, 66) = .09$, $p = .76$, $\eta^2 = .001$. Thus, these results provided some evidence that having previous training in ASD differentially impacted how much participants benefited from *Experience Autism*.

Table 11

Demographic Characteristic: Years in Force

	Global Knowledge		Confidence		Practicality		Nervousness		Perceived Knowledge	
Pretest	*M* (*SD*)	95% CI	*M* (*SD*)	95% CI	*M* (*SD*)	95% CI	*M* (*SD*)	95% CI	*M* (*SD*)	95% CI
0 – 5 years	17.50 (2.59)	[14.78, 20.22]	2.83 (0.41)	[2.40, 3.26]	2.17 (0.41)	[1.74, 2.60]	1.67 (0.82)	[0.81, 2.53]	2.50 (0.55)	[1.92, 3.08]
6 – 10 years	17.18 (2.20)	[16.20, 18.16]	2.76 (0.70)	[2.44, 3.08]	2.18 (0.59)	[1.92, 2.44]	2.33 (0.97)	[1.89, 2.77]	2.43 (0.68)	[2.12, 2.74]
11 – 15 years	17.84 (1.54)	[17.10, 18.58]	2.63 (0.49)	[2.39, 2.87]	2.16 (0.90)	[1.73, 2.59]	1.89 (0.74)	[1.53, 2.25]	2.47 (0.51)	[2.22, 2.72]
16 – 20 years	18.00 (2.39)	[16.00, 20.00]	2.71 (0.76)	[2.01, 3.41]	1.75 (0.46)	[1.36, 2.14]	1.87 (0.64)	[1.34, 2.40]	2.37 (0.74)	[1.75, 2.99]
21 – 25 years	18.62 (1.47)	[17.14, 20.10]	2.33 (0.82)	[2.46, 3.54]	2.17 (0.75)	[1.38, 2.96]	2.50 (1.05)	[1.40, 3.60]	2.33 (0.52)	[1.78, 2.88]
26 – 30 years	19.00 (1.82)	[16.10, 21.90]	2.50 (0.58)	[1.58, 3.42]	2.00 (0.00)	[2.00, 2.00]	2.00 (0.82)	[0.70, 3.30]	2.25 (0.50)	[1.45, 3.05]
30+ years	16.33 (2.02)	[11.16, 21.50]	2.67 (0.58)	[1.23, 4.11]	3.00 (0.00)	[3.00, 3.00]	2.00 (1.00)	[-0.48, 4.48]	2.66 (0.58)	[1.22, 4.10]
Posttest										
0 – 5 years	20.17 (0.75)	[19.38, 20.96]	3.00 (0.00)	[3.00,3.00]	2.67 (0.52)	[2.12, 3.22]	1.67 (0.52)	[1.12, 2.22]	3.00 (0.00)	[3.00, 3.00]
6 – 10 years	18.27 (1.96)	[17.40, 19.14]	2.90 (0.54)	[2.65,3.15]	2.54 (0.51)	[2.31, 2.77]	1.86 (0.73)	[1.53, 2.19]	2.67 (0.66)	[2.37, 2.97]
11 – 15 years	18.58 (2.01)	[17.61, 19.55]	2.68 (0.67)	[2.36,3.00]	2.42 (0.69)	[2.09, 2.75]	1.63 (0.60)	[1.34, 1.92]	2.53 (0.70)	[2.19, 2.87]
16 – 20 years	18.62 (1.77)	[17.14, 20.10]	3.00 (0.58)	[2.46,3.54]	2.50 (0.53)	[2.06, 2.94]	1.62 (0.74)	[1.00, 2.24]	3.00 (0.53)	[2.56, 3.44]
21 – 25 years	19.00 (1.09)	[17.86, 20.14]	3.00 (0.63)	[2.34,3.66]	2.50 (0.55)	[1.92, 3.08]	2.33 (1.03)	[1.25, 3.41]	2.83 (0.41)	[2.40, 3.26]
26 – 30 years	19.25 (1.50)	[16.86, 21.64]	3.00 (0.82)	[1.70,4.30]	3.33 (0.58)	[1.89, 4.77]	1.50 (0.58)	[0.58, 2.42]	3.25 (0.50)	[2.45, 4.05]
30+ years	18.33 (3.05)	[10.75, 25.91]	3.00 (1.00)	[0.52, 5.48]	2.67 (0.58)	[1.23, 4.11]	1.67 (0.58)	[0.23, 3.11]	2.66 (0.58)	[1.22, 4.10]
Time[a]	***F*(1, 61) = 16.49, *p* = <.001, η^2 = .21**		***F*(1, 59) = 6.75, *p* = .012, η^2 = .10**		***F*(1, 60) = 11.37, *p* = .001, η^2 = .16**		***F*(1, 60) = 7.72, *p* = .01, η^2 = .11**		***F*(1, 60) = 16.17, *p* = <.001, η^2 = .21**	
Group[a]	*F*(6, 61) = .90, *p* = .50, η^2 = .08		*F*(6, 59) = .41, *p* = .87, η^2 = .04		*F*(6, 60) = 1.21, *p* = .31 η^2 = .11		*F*(6, 60) = 1.12, *p* = .36, η^2 = .10		*F*(6, 60) = .36, *p* = .90, η^2 = .035	
Time X Group[a]	*F*(6, 61) = 1.58, *p* = .17, η^2 = .13		*F*(6, 59) = .64, *p* = .70, η^2 = .06		*F*(6, 60) = 1.29, *p* = .28, η^2 = .11		*F*(6, 60) = .57, *p* = .76, η^2 = .05		*F*(6, 60) = 1.73, *p* = .13, η^2 = .15	

Note. [a]*F*(*df*) = *x*, *p* = *x*, η^2 = *x*.

Table 12

Demographic Characteristic: Job Type

	Global Knowledge		Confidence		Practicality		Nervousness		Perceived Knowledge	
Pretest	*M* (*SD*)	95% CI	*M* (*SD*)	95% CI	*M* (*SD*)	95% CI	*M* (*SD*)	95% CI	*M* (*SD*)	95% CI
Administrative	17.80 (2.39)	[14.83, 20.77]	2.20 (0.45)	[1.64, 2.76]	2.00 (1.00)	[0.76, 3.24]	2.00 (0.71)	[1.12, 2.88]	2.00 (0.71)	[1.12, 2.88]
Detective	17.75 (0.89)	[17.01, 18.49]	2.37 (0.52)	[1.93, 2.81]	1.87 (0.64)	[1.34, 2.40]	2.10 (1.13)	[1.15, 3.05]	2.25 (0.46)	[1.86, 2.64]
Patrol	17.47 (2.32)	[16.66, 18.28]	2.75 (0.62)	[2.53, 2.97]	2.18 (0.68)	[1.94, 2.42]	2.21 (0.93)	[1.88, 2.54]	2.51 (0.62)	[2.29, 2.73]
Special Unit	19.00 (0.82)	[17.70, 20.30]	2.75 (0.50)	[1.95, 3.55]	2.25 (0.50)	[1.45, 3.05]	1.75 (0.50)	[0.95, 2.55]	2.25 (0.50)	[1.45, 3.05]
Supervisory	17.50 (2.27)	[15.88, 19.12]	2.80 (0.63)	[2.35, 3.25]	2.20 (0.63)	[1.75, 2.65]	1.90 (0.57)	[1.49, 2.31]	2.50 (0.53)	[2.12, 2.88]
Traffic	18.33 (1.21)	[17.06, 19.60]	2.67 (0.82)	[1.81, 3.53]	2.32 (0.82)	[1.46, 3.18]	1.83 (0.98)	[0.80, 2.86]	2.67 (0.52)	[2.12, 3.22]
Posttest										
Administrative	18.60 (2.07)	[16.03, 21.17]	3.00 (0.00)	[3.00, 3.00]	2.60 (0.55)	[1.92, 3.28]	1.60 (0.55)	[0.92, 2.28]	3.00 (0.00)	[3.00, 3.00]
Detective	18.87 (2.03)	[17.17, 20.57]	2.50 (0.76)	[1.86, 3.14]	2.25 (0.71)	[1.66, 2.84]	1.87 (0.83)	[1.18, 2.56]	2.50 (0.76)	[1.86, 3.14]
Patrol	18.85 (1.95)	[18.17, 19.53]	2.84 (0.57)	[2.63, 3.05]	2.45 (0.51)	[2.27, 2.63]	1.88 (0.74)	[1.62, 2.14]	2.61 (0.61)	[2.39, 2.83]
Special Unit	17.75 (2.22)	[14.22, 21.28]	2.75 (0.50)	[1.85, 3.55]	2.75 (0.50)	[1.95, 3.55]	1.50 (0.58)	[0.58, 2.42]	2.75 (0.50)	[1.95, 3.55]
Supervisory	18.50 (1.80)	[17.21, 19.79]	3.30 (0.67)	[2.82, 3.78]	3.00 (0.67)	[2.52, 3.48]	1.60 (0.70)	[1.10, 2.10]	3.20 (0.63)	[2.75, 3.65]
Traffic	18.33 (1.03)	[17.25, 19.41]	2.83 (0.41)	[2.40, 3.26]	2.67 (0.52)	[2.12, 3.22]	1.50 (0.55)	[0.92, 2.08]	2.83 (0.41)	[2.40, 3.26]
Time[a]	***F*(1, 61) = 3.63, *p* = .06, η^2 = .06**		***F*(1, 59) = 5.69, *p* = .02, η^2 = .09**		***F*(1, 60) = 12.01, *p* = .001, η^2 = .17**		***F*(1, 60) = 8.50, *p* = .005, η^2 = .12**		***F*(1, 60) = 19.28, *p* = <.001, η^2 = .24**	
Group[a]	*F*(5, 61) = .048, *p* = .99, η^2 = .004		*F*(5, 59) = 1.71, *p* = .15, η^2 = .13		*F*(5, 60) = 1.51, *p* = .20, η^2 = .11		*F*(5, 60) = .63, *p* = .68, η^2 = .05		*F*(5, 60) = 1.10, *p* = .37, η^2 = .08	
Time X Group[a]	*F*(5, 61) = 2.13, *p* = .07, η^2 = .15		*F*(5, 59) = 1.14, *p* = .35, η^2 = .09		*F*(5, 60) = .61, *p* = .70, η^2 = .05		*F*(5, 60) = .043, *p* = .999, η^2 = .004		***F*(5, 60) = 2.65, *p* = .031, η^2 = .18**	

Note. [a]F(*df*) = *x*, *p* = *x*, η^2 = *x*.

Table 13

Demographic Characteristic: Gender

	Global Knowledge		Confidence		Practicality		Nervousness		Perceived Knowledge	
Pretest	*M* (*SD*)	95% CI	*M* (*SD*)	95% CI	*M* (*SD*)	95% CI	*M* (*SD*)	95% CI	*M* (*SD*)	95% CI
Male	17.49 (2.02)	[16.97, 18.01]	2.71 (0.62)	[2.55, 2.87]	2.13 (0.67)	[1.96, 2.30]	2.10 (0.88)	[1.42, 2.78]	2.42 (0.59)	[2.27, 2.57]
Female	19.00 (1.32)	[17.99, 20.01]	2.44 (0.53)	[2.03, 2.85]	2.25 (0.71)	[1.66, 2.84]	2.11 (0.93)	[1.40, 2.82]	2.44 (0.53)	[2.03, 2.85]
Posttest										
Male	18.11 (2.98)	[17.35, 18.87]	2.88 (0.59)	[2.73, 3.03]	2.54 (0.56)	[2.40, 2.68]	1.78 (0.71)	[1.23, 2.33]	2.72 (0.61)	[2.56, 2.88]
Female	20.33 (0.71)	[19.78, 20.88]	2.89 (0.60)	[2.43, 3.35]	2.62 (0.74)	[2.00, 3.24]	1.78 (0.67)	[1.27, 2.29]	2.89 (0.60)	[2.43, 3.35]
Time[a]	***F*(1, 68) = 4.11, *p* = .046, η^2 = .06**		***F*(1, 59) = 5.32, *p* = .02, η^2 = .07**		***F*(1, 67) = 5.76, *p* = .02, η^2 = .08**		***F*(1, 67) = 7.64, *p* = .007, η^2 = .10**		***F*(1, 67) = 8.85, *p* = .004, η^2 = .12**	
Group[a]	***F*(1, 68) = 6.77, *p* = .01, η^2 = .09**		*F*(1, 66) = .60, *p* = .44, η^2 = .01		*F*(1, 67) = .35, *p* = .59, η^2 = .05		*F*(1, 67) = .005, *p* = .94, η^2 = .00		*F*(1, 67) = .33, *p* = .57, η^2 = .005	
Time X Group[a]	*F*(1, 68) = 0.54, *p* = .46, η2 = .01		*F*(1, 66) = 1.07, *p* = .30, η^2 = .02		*F*(1, 67) = 0.011, *p* = .91, η^2 = .00		*F*(1, 67) = .005, *p* = .94, η^2 = .000		*F*(1, 67) = 0.33, *p* = .57, η^2 = .005	

Note. [a]F(*df*) = *x*, *p* = *x*, η^2 = *x*.

Table 14

Demographic Characteristic: Ethnicity

	Global Knowledge		Confidence		Practicality		Nervousness		Perceived Knowledge	
Pretest	*M* (*SD*)	95% CI	*M* (*SD*)	95% CI	*M* (*SD*)	95% CI	*M* (*SD*)	95% CI	*M* (*SD*)	95% CI
White	17.71 (2.05)	[17.09, 18.33]	2.67 (0.52)	[2.51, 2.83]	2.16 (0.74)	[1.94, 2.38]	2.04 (0.83)	[1.79, 2.29]	2.45 (0.59)	[2.27, 2.63]
Black	17.67 (1.53)	[13.87, 21.47]	2.00 (0.00)	[2.00, 2.00]	2.33 (0.58)	[0.89, 3.77]	2.33 (1.53)	[-1.47, 6.13]	2.00 (0.00)	[2.00, 2.00]
Hispanic	17.50 (2.28)	[16.05, 18.95]	2.92 (0.79)	[2.42, 3.42]	1.91 (0.51)	[1.59, 2.23]	2.25 (0.87)	[1.70, 2.80]	2.50 (0.67)	[2.08, 2.92]
Asian	16.67 (2.31)	[10.93, 22.41]	2.67 (0.58)	[1.23, 4.11]	2.00 (0.00)	[2.00, 2.00]	2.00 (1.00)	[-0.48, 4.48]	2.00 (0.00)	[2.00, 2.00]
Native American	19.00 (1.73)	[14.70, 23.30]	2.00 (1.00)	[-0.48, 4.48]	2.50 (0.71)	[-3.88, 8.88]	2.00 (1.00)	[-0.48, 4.48]	2.33 (0.58)	[0.89, 3.77]
Other	18.50 (0.71)	[12.12, 24.88]	3.00 (0.00)	[3.00, 3.00]	3.00 (0.00)	[3.00, 3.00]	1.5 (0.71)	[-4.88, 7.88]	3.00 (0.00)	[3.00, 3.00]
Posttest										
White	18.58 (1.68)	[18.08, 19.08]	2.93 (0.51)	[2.77, 3.09]	2.62 (0.58)	[2.45, 2.79]	1.7 (0.59)	[1.52, 1.88]	2.84 (0.53)	[2.68, 3.00]
Black	17.33 (3.05)	[9.75, 24.91]	2.33 (1.15)	[-0.53, 5.19]	2.33 (1.15)	[-0.53, 5.19]	2.00 (1.00)	[-0.48, 4.48]	2.00 (1.00)	[-0.48, 4.48]
Hispanic	18.5 (2.23)	[17.08, 19.92]	2.83 (0.72)	[2.37, 3.29]	2.33 (0.49)	[2.02, 2.64]	2.08 (1.00)	[1.44, 2.72]	2.58 (0.51)	[2.26, 2.90]
Asian	20.33 (0.58)	[18.89, 21.77]	2.33 (0.58)	[0.89, 3.77]	2.33 (0.58)	[0.89, 3.77]	1.33 (0.58)	[-0.11, 2.77]	2.00 (1.00)	[-0.48, 4.48]
Native American	19.67 (1.53)	[15.87, 23.47]	3.33 (0.58)	[1.89, 4.77]	3.00 (0.00)	[3.00, 3.00]	1.67 (0.58)	[0.23, 3.11]	3.33 (0.58)	[1.89, 4.77]
Other	20.50 (0.71)	[14.12, 26.88]	3.00 (0.00)	[3.00, 3.00]	2.50 (0.71)	[-3.88, 8.88]	1.5 (0.71)	[-4.88, 7.88]	3.00 (0.00)	[3.00, 3.00]
Time[a]	***F*(1, 62) = 13.04, *p* = .001, η^2 = .17**		*F*(1, 60) = 2.72, *p* = .10, η^2 = .04		*F*(1, 61) = 1.07, *p* = .31, η^2 = .02		***F*(1, 61) = 4.67, *p* = .035, η^2 = .07**		*F*(1, 61) = 2.79, *p* = .10, η^2 = .04	
Group[a]	*F*(5, 62) = .63, *p* = .68, η^2 = .05		*F*(5, 60) = 1.50, *p* = .20, η^2 = .11		*F*(5, 61) = 1.37, *p* = .25, η^2 = .10		*F*(5, 61) = .603, *p* = .70, η^2 = .047		***F*(5, 61) = 2.67, *p* = .03, η^2 = .18**	
Time X Group[a]	*F*(5, 62) = 2.02, *p* = .09, η^2 = .14.		***F*(5, 60) = 2.29, *p* = .06, η^2 = .16**		*F*(5, 61) = .60, *p* = .70, η^2 = .05		*F*(5, 61) = .38, *p* = .86, η^2 = .03		*F*(5, 61) = 1.28, *p* = .29, η^2 = .09	

Note. [a]F(*df*) = *x*, *p* = *x*, η^2 = *x*.

Table 15

Demographic Characteristic: Relationship

	Global Knowledge		Confidence		Practicality		Nervousness		Perceived Knowledge	
Pretest	*M* (*SD*)	95% CI	*M* (*SD*)	95% CI	*M* (*SD*)	95% CI	*M* (*SD*)	95% CI	*M* (*SD*)	95% CI
Yes	17.67 (1.94)	[16.18, 19.16]	2.67 (0.50)	[2.28, 3.06]	2.37 (0.52)	[1.93, 2.81]	2.44 (0.88)	[1.76, 3.12]	2.33 (0.50)	[1.94, 2.72]
No	17.69 (2.03)	[17.17, 18.21]	2.68 (0.63)	[2.52, 2.84]	2.11 (0.68)	[1.94, 2.28]	2.05 (0.87)	[1.83, 2.27]	2.43 (0.59)	[2.28, 2.58]
Posttest										
Yes	19.00 (1.94)	[17.51, 20.49]	2.78 (0.44)	[2.44, 3.12]	2.37 (0.52)	[1.93, 2.81]	2.00 (0.87)	[1.33, 2.67]	2.67 (0.71)	[2.12, 3.22]
No	18.31 (3.00)	[17.54, 19.08]	2.90 (0.61)	[2.74, 3.06]	2.57 (0.59)	[2.42, 2.72]	1.75 (0.68)	[1.57, 1.93]	2.75 (0.60)	[2.60, 2.90]
Time[a]	***F*(1, 68) = 4.11, *p* = .05, η^2 = .06**		*F*(1, 66) = 1.53, *p* = .22, η^2 = .02		*F*(1, 67) = 2.03, *p* = .16, η^2 = .03		***F*(1, 67) = 10.08, *p* = .002, η^2 = .13**		***F*(1, 67) = 6.72, *p* = .01, η^2 = 2.09**	
Group[a]	*F*(1, 68) = .2, *p* = .66, η^2 = .003		*F*(1, 66) = .15, *p* = .70, η^2 = .002		*F*(1, 67) = .032, *p* = .86, η^2 = <.001		*F*(1, 67) = 1.56, *p* = .22, η^2 = .023		*F*(1, 67) = .28, *p* = .60, η^2 = .004	
Time X Group[a]	*F*(1, 68) = .54, *p* = .46, η^2 = .01		*F*(1, 66) = .17, *p* = .68, η^2 = .003		*F*(1, 67) = 2.03, *p* = .16, η^2 = .03		*F*(1, 67) = .38, *p* = .54, η^2 = .006		*F*(1, 67) = .004, *p* = .95, η^2 = .00	

Note. [a]F(*df*) = *x*, *p* = *x*, η^2 = *x*.

Table 16

Demographic Characteristic: Previous Training

	Global Knowledge		Confidence		Practicality		Nervousness		Perceived Knowledge	
Pretest	*M* (*SD*)	95% CI	*M* (*SD*)	95% CI	*M* (*SD*)	95% CI	*M* (*SD*)	95% CI	*M* (*SD*)	95% CI
Yes	17.92 (1.84)	[17.14, 18.70]	2.70 (0.56)	[2.46, 2.94]	2.59 (0.56)	[2.41, 2.77]	2.00 (1.02)	[1.57, 2.43]	2.67 (0.56)	[2.43, 2.91]
No	17.56 (2.09)	[16.94, 18.18]	2.29 (0.55)	[2.12, 2.46]	2.06 (0.71)	[1.85, 2.27]	2.16 (0.80)	[1.92, 2.40]	2.29 (0.55)	[2.12, 2.46]
Posttest										
Yes	19.25 (1.77)	[18.50, 20.00]	2.74 (0.69)	[2.44, 3.04]	2.48 (0.51)	[2.26, 2.70]	1.71 (0.81)	[1.37, 2.05]	2.75 (0.68)	[2.46, 3.04]
No	17.96 (3.25)	[17.00, 18.92]	2.73 (0.58)	[2.56, 2.90]	2.59 (0.62)	[2.41, 2.77]	1.82 (0.65)	[1.62, 2.02]	2.73 (0.58)	[2.56, 2.90]
Time[a]	***F*(1, 68) = 6.56, *p* = .01, η^2 = .09**		*F*(1, 66) = 2.63, *p* = .11, η^2 = .04		***F*(1, 67) = 10.19, *p* = .002, η^2 = .13**		***F*(1, 67) = 14.15, *p* = <.001, η^2 = .17**		***F*(1, 67) = 9.44, *p* = .003, η^2 = .12**	
Group[a]	*F*(1, 68) = 2.50, *p* = .12, η^2 = .03		***F*(1, 66) = 4.44, *p* = .04, η^2 = .06**		*F*(1, 67) = .31, *p* = .58, η^2 = .005		*F*(1, 67) = .54, *p* = .47, η^2 = .01		*F*(1, 67) = 2.68, *p* = .11, η^2 = .04	
Time X Group[a]	*F*(1, 68) = 1.96, *p* = .17, η^2 = .03		***F*(1, 66) = 4.3, *p* = .04, η^2 = .06**		*F*(1, 67) = 2.55, *p* = .11, η^2 = .04		*F*(1, 67) = .06, *p* = .80, η^2 = .001		***F*(1, 67) = 4.42, *p* = .04, η^2 = .06**	

Note. [a]F(*df*) = *x*, *p* = *x*, η^2 = *x*.

Table 17

Demographic Characteristic: Interaction

	Global Knowledge		Confidence		Practicality		Nervousness		Perceived Knowledge	
Pretest	*M* (*SD*)	95% CI	*M* (*SD*)	95% CI	*M* (*SD*)	95% CI	*M* (*SD*)	95% CI	*M* (*SD*)	95% CI
Yes	17.65 (2.05)	[17.15, 18.15]	2.69 (0.61)	[2.54, 2.84]	2.17 (0.67)	[2.00, 2.34]	2.12 (0.89)	[1.90, 2.34]	2.43 (0.58)	[2.29, 2.57]
No	18.25 (0.96)	[16.72, 19.78]	2.50 (0.58)	[1.58, 3.42]	1.75 (0.50)	[0.95, 2.55]	1.75 (0.50)	[0.95, 2.55]	2.25 (0.50)	[1.45, 3.05]
Posttest										
Yes	18.36 (2.93)	[17.64, 19.08]	2.91 (0.58)	[2.76, 3.06]	2.57 (0.58)	[2.43, 2.71]	1.78 (0.72)	[1.60, 1.96]	2.75 (0.61)	[2.60, 2.90]
No	19.00 (2.16)	[15.56, 22.44]	2.50 (0.58)	[1.58, 3.42]	2.25 (0.50)	[1.45, 3.05]	1.75 (0.50)	[0.95, 2.55]	2.50 (0.58)	[1.58, 3.42]
Time[a]	$F(1, 68) = .1.10$, $p = .30$, $\eta^2 = .02$		$F(1, 66) = .32$, $p = .57$, $\eta^2 = .005$		**$F(1, 67) = .4.04$, $p = .048$, $\eta^2 = .06$**		$F(1, 67) = 1.01$, $p = .32$, $\eta^2 = .02$		$F(1, 67) = .2.51$, $p = .12$, $\eta^2 = .04$	
Group[a]	$F(1, 68) = .33$, $p = .57$, $\eta^2 = .005$		$F(1, 66) = 1.52$, $p = .22$, $\eta^2 = .023$		$F(1, 67) = 2.52$, $p = .12$, $\eta^2 = .04$		$F(1, 67) = .29$, $p = .59$, $\eta^2 = .004$		$F(1, 67) = .76$, $p = .39$, $\eta^2 = .011$	
Time X Group[a]	$F(1, 68) = .001$, $p = .98$, $\eta^2 = .00$		$F(1, 66) = .32$, $p = .57$, $\eta^2 = .005$		$F(1, 67) = .05$, $p = .82$, $\eta^2 = .001$		$F(1, 67) = 1.01$, $p = .32$, $\eta^2 = .02$		$F(1, 67) = .41$, $p = .84$, $\eta^2 = .001$	

Note. [a]$F(df) = x$, $p = x$, $\eta^2 = x$.

CHAPTER 4

DISCUSSION

Modules

The purpose of this study was to evaluate the effectiveness of *Experience Autism* training on officer's knowledge of core ASD symptoms. Analyses conducted on the six modules of the training revealed significant improvements in knowledge of targeted ASD symptoms in four of the six modules: *Clip It*, *Say What?*, *Do You Read Me?*, and *Chaos*. The effect size for the first three modules ranged from moderate to high, while *Chaos* demonstrated a small effect size. Notably, each of these modules were conducted with participants organized into small groups of 15 to 20 people. The use of small group cooperative learning has long been supported by research as an effective way to teach information (Johnson, Johnson & Smith, 1991). Thus, it is possible that the small group size and collaborative learning experience may have fostered a more intimate engagement with the simulation activities. This level of engagement may have factored into the participants' improved scores in each of these modules.

In considering the small effect size of *Chaos*, it is important to note that the module utilized strobe lights, whistles, bells, and other noise-making objects to stimulate sensory overload in police officers. Importantly, police officers are trained to ignore distracting stimuli and to hone their ability to focus on relevant information. Furthermore, police officers routinely work in noisy environments and are exposed to sirens, lights,

and radio chatter on a regular basis. It is possible that this exposure to high levels of sensory stimulation made it more difficult for police officers to experience sensory overload. Thus, it is not unreasonable to hypothesize that such routine sensory exposure might increase stimuli tolerance and make it harder for police officers to empathize with persons who are sensitive to this type of exposure. For future trainings, it may be helpful to consider what types of stimuli might have more of an effect on police officers. For example, anecdotal data we collected from our trainings suggested that police officers disliked when volunteers got too close to them. Consequently, limiting the amount of space available in the room and inhibiting personal space may increase police officers' susceptibility to sensory overload. Due to the intrusive nature of these changes, police officers should be asked specifically to consent to participate in this simulation activity.

Contrary to our predictions, no significant improvements were identified in two modules—*Write On* and *The Envelope, Please*. There are several possible explanations for the participants' lack of improvement in these modules. First, the training for these two modules was administered to all participants as a large group at all three events. This was done to meet logistical requirements set up by the police departments where the trainings took place. On all 3 training days, facilitators observed that participants were frequently and easily distracted by other participants. The larger group provided greater anonymity, and participants appeared to be more comfortable chatting amongst themselves without attracting undue attention. Thus, it is possible that some participants may not have been attending to the simulation activities for these modules. In the future, it might be helpful to continually highlight the importance of conducting modules in small groups to interested law enforcement departments.

Secondly, the *Write On* and *The Envelope, Please* modules were the first and last tasks administered to participants. *Write On* was administered immediately after a 30- to 40-minute broad program pretest. After each training event, administrators informed the research team that participants were unhappy with the length of the broad program pretest. Moreover, given the time frame for training established by each police department, it was not possible for participants to take a break between the broad program pretest and the first module. Thus, participants may have experienced exhaustion or boredom immediately before *Write On.* Similarly, it may be possible that the participants were tired by the time *The Envelope, Please* was administered near the end of the day. Taken together, these factors may have contributed to the lack of improvement in knowledge of ASD symptoms in these two modules. This problem may naturally resolve itself in future trainings as the 30- to 40-minute Global Pretest is not a fixed component of the *Experience Autism* program. Thus, there would be a shorter interlude between introduction and assignment to modules as well as a reduction in the total length of the training.

Another important element of the data was that pretest mean scores for most modules (see Table 5) were relatively high. This suggests that participants had some previous knowledge of ASD before the training. One possible explanation is that police officers are actively attaining knowledge of the disorder through various means such as increased personal encounters with individuals diagnosed with ASD. This possibility is supported by the data which indicates that 87% of participants reported that they had encountered persons with ASD during the course of their police work. In addition, 21% of participants reported that they had personal connections with individuals with ASD

outside of their work. Thus, the high prevalence of ASD across the nation may be contributing to increased exposure to the disorder.

In addition, the mean years of service for police officers were relatively high (M = 12.75), which may have increased their likelihood of having multiple encounters with persons diagnosed with ASD over the years. Lastly approximately 34% of participants reported that they had received previous training on ASD, reflecting the higher demand for ASD training within the law enforcement community. Overall, this information suggests that increased exposure to persons with ASD as well as previous training on ASD may have contributed to previous knowledge and familiarity with the material presented.

Complete Program Evaluation

Participants who chose to complete the Global Pretest and Posttest provided important information about the effectiveness of the program as a whole. Overall, police officers' broad knowledge of ASD increased after training, and the effect size for the intervention was moderate. Police officers also noticed a shift in their knowledge and reported an increase in their perceived knowledge about ASD after training (large effect size). The moderate effect size for broad knowledge may be accounted for, in part, by the 34% of participants who had received training on ASD in the past. It is possible that these participants had already reached a ceiling in their knowledge of ASD and, as a result, may have already known the answers to the factual questions asked in the assessments. However, the training not only targeted knowledge but also aimed to empower police officers to improve their interactions with individuals with ASD.

The simulation activities in each module aimed to help police officers develop empathy for individuals diagnosed with ASD by having them experience key features of ASD. Ms. Iland designed these activities with the belief that taking the perspective of an individual with ASD would help police officers identify ways to interact with this population more effectively. After training, police officers reported an increase in their confidence to interact with individuals diagnosed with ASD. In addition, police officers' posttest scores demonstrated a significant increase in their belief that it was practical to provide accommodations to people with ASD in the field. Both of these effect sizes were large. It must be noted that measures of empathy were not used in this study. This was due to a concern that such measures might not be approved by leadership at police departments due to the potential for scores produced by these measures to be misinterpreted by untrained consumers of research. However, these findings reflect positive changes in two domains (i.e., confidence and perceived practicality of accommodations) that have the potential to improve future interactions between police officers and individuals diagnosed with ASD.

In general, most police officers thought that people with ASD were not dangerous even before the training (see Table 7). Only five police officers reported that they thought individuals diagnosed with ASD were dangerous and two of them changed their minds at posttest. Three participants continued to hold the belief that people with ASD are dangerous even after the training. An in-depth analysis of individual characteristics and scores was conducted to explore potential reasons for the participants' flexibility or rigidity in their perceptions. However, no significant patterns emerged from this review. Four of the five participants increased in their knowledge of ASD after training with the

remaining participant having decreased his score at posttest by 1 point. This participant was also one of the three participants who did not change their minds about the dangerousness of people with ASD. However, due to the lack of other patterns, this alone cannot be used to make any inferences.

The one common factor among the participants who viewed people with ASD as dangerous is that they all had interacted with individuals with ASD in the course of their work as police officers. While it was outside the scope of this study to collect information about the details of these encounters, it is important to acknowledge that police work is a stressful occupation (Beehr, Johnson & Nieva, 1995) and it is possible that these encounters were not perceived favorably. Unfavorable outcomes in these interactions may have impacted these participants' perceptions about the threat posed by individuals diagnosed with ASD. Future studies may find it helpful to include a measure of perceived threat and stress level in association with encounters with ASD-diagnosed individuals. These types of measures could help assess which features of ASD are perceived to be most worrisome to law enforcement officers and provide some guidance about how to address these concerns.

The present study attempted to capture participants' general attitude towards situations involving individuals diagnosed with ASD by presenting the police officers with a vignette. The given scenario described a young person exhibiting core features of ASD. Participants reported an increase in their confidence after going through the training (moderate effect size), indicating that the program contributed to their perceived ability to handle the situation. Police officers also reported an increase in their knowledge to make accommodations in the given scenario and an overall decrease in nervousness

around the situation (large effect sizes). These findings along with reported gains in knowledge of ASD provide some support that the training equipped police officers with necessary skills for interacting with individuals diagnosed with ASD in the community.

The vignette also asked participants to report whether or not they would accept the help of a caregiver offering assistance during the encounter. Even before training, most police officers were willing to accept such help with only two participants endorsing "no" at pretest. One of these participants later switched to "yes" after the training. The participant who did not change his mind about accepting help from a caregiver identified as a male, African American detective with 11 years of experience on the force. Notably, his broad knowledge of ASD decreased by 4 points after training (Pretest = 18/21; Posttest = 14/21) demonstrating an uncommon loss of knowledge over time. In addition, his scores were the lowest possible across all domains assessed at posttest even when he had rated higher on domains at pretest (e.g., confidence in interacting with ASD diagnosed individuals: Pretest = *fair*; Posttest = *poor*). This participant also rated the training program as "not relevant" to his work as a law enforcement officer.

The participant who changed her mind about accepting the help from a caregiver identified as a female, Asian American special unit officer with 6.5 years of experience in the force. The participant demonstrated increased knowledge of ASD (Pretest = 18/21; Posttest = 21/21) over the course of the training but retained the same scores (i.e., ratings of *fair*) across all domains assessed in the Global Pretest and Posttest. She reported that the training program was "moderately relevant" to her work as a law enforcement officer. Both participants were similar in that they had no prior training in ASD, no personal

connections to individuals diagnosed with ASD, and no previous interactions with ASD-diagnosed individuals during the course of their job. In addition, both participants were assigned to duties within specialized departments whose responsibilities may have decreased their likelihood of encountering a person diagnosed with ASD in the community.

Based on his uncommon decline in scores over time and across domains, it is possible that the participant who did not change his mind about accepting help may have had a uniquely unfavorable experience during training. In considering his responses, it is important to note that the participant reported that he did not find the training relevant to his work. This may have made the training tedious and could have led to lack of engagement and inattention. Given the participant's disinterest, it may be possible that he purposely responded in a manner opposite to how he thought the researchers expected him to act or experienced cognitive rigidity around accepting recommendations made during the training. In contrast, while the female participant also belonged to a specialized department, the participant reported that the training was moderately relevant to her work. This perception may have positively impacted her engagement with the training and resulted in the measurable gains in her knowledge about ASD. In addition, her favorable perception of the training may have made the participant more receptive to recommendations made during the program.

Overall, about 88% of police officers reported that they believed the training was moderately or highly relevant to their work as police officers and 96% indicated that they felt more prepared to interact with people with ASD after the training (see Table 8). Notably, about 25% of participants also reported that they found all modules to be

helpful, while another 74% of participants provided responses about what module they considered to be the most helpful. The most popular modules included *Say What? Chaos*, and *Do You Read Me?*. Only 1 individual out of 53 participants reported that none of the modules were helpful.

The three participants who did not feel more prepared after training to interact with individuals diagnosed with ASD also reported that they either did not find the training relevant to their work or found it only slightly relevant. One of these participants was also the individual who did not change his mind about accepting help from a caregiver in the situation described in the vignette. In addition, one of these three participants who did not feel more prepared after the training was the individual who reported that he found none of the modules helpful. These observations may highlight that the training may not be as effective for individuals who do not find the material relevant to their work as law enforcement officers. Analyzing whether these participants' perspectives about their jobs is accurate or inaccurate is outside the scope of this study. However, it may be helpful to consult with interested police departments about the roles performed by the potential participants in the training event. Gathering this information may be helpful to Ms. Iland in tailoring examples based on the experiences of her audience.

Exploratory Analyses

Exploratory analyses were conducted with the intent of identifying important trends in the data that may have limited application due to small sample sizes or other factors but may potentially lead to new areas of inquiry for future research. In particular,

the analyses focus on personal characteristics of the participants that may have moderated the effectiveness of the program. These results are summarized in Tables 11 to 17. While interesting, these findings should be interpreted with caution and should only be used to guide and inform future research questions.

In terms of overall improvement in knowledge of ASD over time, there was a significant main effect for gender. This result suggested that women were, in general, more knowledgeable than men when it came to understanding ASD. However, only nine women participated in this part of the research compared to 61 males. Thus, it would be interesting to assess whether this pattern was maintained with a larger, more proportionate sample size. Research has shown that women tend to be more empathic than men (Batson et al., 1996; Gault & Sabini, 2000; Lennon & Eisenberg, 1987; Macaskill, Maltby & Day, 2002), which suggests that gender may have a role in willingness to attain knowledge about a condition that evokes empathy. If the trend proved to be significant in a larger sample, it would be interesting to consider gender differences in the relationship between empathy and the acquisition of knowledge related to ASD. Researchers could examine gender differences in levels of empathy and knowledge and the extent to which the association of empathy and willingness to learn more about a topic (i.e., ASD) differed by gender.

There were also multiple findings within the vignette data. First, officers assigned to administrative and supervisory positions reported a significant increase in knowledge of how to make accommodations for people with ASD post-training compared to pre-training. These findings may be related to the fact that these positions generally do not require active engagement with individuals in the community. For instance, it may be that

individuals assigned to positions that are more likely to interact with ASD diagnosed individuals (e.g., patrol, traffic) may already have enough knowledge to make accommodations. Therefore, only individuals who are lacking in knowledge to make accommodations (e.g., those in administrative positions) would benefit from the training. However, this was not the case for our sample given the distribution of means for knowledge at pre and posttest for each job.

Another potential explanation could be that participants who interact with people with ASD may believe that providing accommodations is theoretically a good idea but may have reservations about whether it would be practical in some situations. If they do hold this belief, there may be some resistance to feedback from the training about the feasibility of providing accommodations. In contrast, leadership positions may be more open to hearing this feedback from the training as they may lack exposure to situations that may be coloring the other participants' experience of the training. Future research could focus on why leadership positions may benefit more from training on making accommodations than participants who serve in positions that employ these accommodations.

For ethnicity, a trend towards significance emerged for an interaction between time and ethnicity on ratings of confidence, with White and Native American participants experiencing significant differences in their levels of confidence after training. However, it must be noted that the sample size only consisted of three Native American participants. Thus, no inferences can be made from these results. When it came to perceived knowledge, the effect comparing ethnicity was significant and was followed up with Fisher's LSD with a Bonferroni correction. The analyses suggested that White,

Native American, and "Other" participants reported having greater knowledge of how to make accommodations for individuals with ASD compared to Black and Asian participants. Given the small sample sizes of each ethnic group, no conclusive inferences can be made from this data.

Any future research investigating differences between ethnic groups should take into account the available research on which groups may be prone to over- or under-reporting their knowledge, confidence, or other important factors due to deeply rooted patterns of self-perception. For example, the literature suggests that personal efficacy in African American individuals is greatly impacted by systems of racial inequality (Hughes & Demo, 1989). Thus, it may be possible that African American individuals and other minorities may be unconsciously underrating themselves and their abilities. It is recommended that future research include a measure of self-perception during data collection to assess how self-perception may be impacting participants' experience of training.

Lastly, results showed that participants without previous ASD training reported significant increases in confidence and knowledge of how to make accommodations after training. However, participants who had already received ASD training reported no significant difference in their level of confidence after training. One possible explanation for this finding is that the 24 participants with previous training on ASD may have already reached a ceiling in their confidence and knowledge of how to make accommodations for individuals with ASD. However, a review of the data revealed that some participants whose scores remained relatively stable before and after training had only reported average levels (rather than high levels) of perceived knowledge and

confidence of how to make accommodations. For these participants, other factors that have not been accounted for may be impeding their ability to make gains from additional training in ASD. For example, participants who had already received training may have been less engaged or had greater disinterest in the training. One potential solution to increasing gains in participants who have already received training could be to send out a pre-training survey asking these participants what topics they would like to see again or what questions they still have about interacting with individuals with ASD.

Limitations

There are a few potential limitations to the current study. First, no standardized measures of knowledge about ASD symptoms have been developed; thus a questionnaire was constructed based on the content developed by Ms. Iland for each module. The content of this program has not been compared to available research on ASD, and *Experience Autism* is the sole intellectual property of Ms. Iland. Second, the sample of participants used for this study was required to attend training on ASD. Although the research portion was entirely voluntary, some participants may have been predisposed to feel negatively biased toward the training because the training itself was not voluntary. Third, the sample of participants was limited to officers at two police departments in Southern California. It is unknown whether the results of this study can be generalized beyond this sample.

Notably, Ms. Iland developed the simulation activities in each module to help police officers experience and understand what it is like to live with core impairments of ASD. The main goal of these simulations was to encourage police officers to develop

empathy for individuals with ASD. Thus, it is a limitation of the present study that measures of empathy were not used to assess changes in levels of empathy over the course of the training. The researchers did consider including an empathy measure; however, there was some concern that leadership at police departments would oppose the inclusion due to possible misinterpretations of the data by untrained consumers of research.

It is recommended that more information be provided to leadership about the importance of including measures of empathy and the potential benefits to the department in assessing change in levels of empathy in their workforce. After completion of the initial *Experience Autism* training sequence, another iteration of the program includes an engaging exposure component that pairs police officers with individuals diagnosed with ASD. Officers spend a couple of hours practicing new skills and getting to know their civilian partner. Given the value of this additional component in engaging police officers in perspective taking and developing empathy, leadership may be more open to adding measures of empathy to this version of the training.

Lastly, exposure to traumatic events is a key DSM-5 criterion (American Psychiatric Association, 2013) that must be met for individuals to be diagnosed with posttraumatic stress disorder (PTSD). It was beyond the scope of this study to assess how many of the participants in the training had been exposed to traumatic events over the course of their work as police officers and may have developed symptoms of PTSD. This is important because over-generalization of fear and an inability to modulate fear responses are frequently seen in individuals suffering from PTSD (Jovanovic, Kazama, Bachevalier & Davis, 2012). Thus, any participant with these symptoms may have

experienced the training differently due to a predisposition to experience increased fear over their personal safety when in the field. For example, such participants may have more easily dismissed recommendations for interacting with individuals with ASD due to fear of compromising their safety by following these recommendations. It is recommended that future research include a brief trauma screener, to assess the presence of trauma responses in participants and explore the impact that exposure to trauma may have on participants' experience of the training.

Clinical Applications

The purpose of the present study was to evaluate the effectiveness of Experience Autism in expanding police officers' knowledge of specific ASD impairments. The evaluation of law enforcement training programs on ASD is important because police officers are part of the first line of response to emergency situations and may routinely interact with differently-abled populations in the community (Steadman et al., 2000; Teplin & Pruett, 1992). In addition, there is limited research available on the effectiveness of these trainings and their impact on an officer's ability to appropriately interact with a person diagnosed with ASD (Teagardin et al., 2012). The present study showed significant improvements in participants' knowledge of ASD impairments in four of six in-person training modules. In addition, findings revealed increases in participants' broad knowledge about ASD and confidence in interacting with individuals with ASD as well as gains in other important variables.

These findings are especially significant in light of a recently released statement by the U.S. Department of Justice Civil Rights Division (2017) around required training for law enforcement:

Without proper training, criminal justice personnel may misinterpret the conduct of individuals with mental health disabilities or I/DD as intentional disrespect or disobedience, which may escalate encounters and lead to unnecessary criminal justice involvement. Appropriate training can prepare personnel to execute their ADA responsibilities in a manner that keeps staff, individuals with disabilities, and members of the community safe; promotes public welfare; builds trust with the community; respects the rights of individuals with disabilities; ensures effective use of criminal justice resources; and contributes to reliable investigative and judicial results (Training section, para. 1).

The statement further defined legal obligations to make reasonable accommodations in policies, practices, and procedures to avoid discrimination and maximize safety in interactions with people with disabilities (U.S. Department of Justice Civil Rights Division, 2017). Thus, the fact that officers became more knowledgeable about ASD and felt more confident about making accommodations after participating in *Experience Autism* is significant because the training targeted areas that may help officers not only better address their legal obligations to individuals with disabilities, but also prepare them to serve this population more effectively.

It is essential that effective programs are used to train police officers because these officers are part of the first line of response to emergency situations and may routinely interact with differently-abled populations in the community (Steadman et al.,

2000; Teplin & Pruett, 1992). Given the value of the *Experience Autism* training in producing favorable outcomes and measurable gains, it is important to consider its potential benefit to other first responders and emergency workers. For example, firefighters and paramedics routinely respond to stressful events and may find it helpful to know how to engage with people diagnosed with mental health concerns and developmental disorders. As such, *Experience Autism* is a good candidate to meet these training needs and should continue to be assessed for effectiveness with these first responder populations.

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APPENDIX A

GLOBAL PRETEST MEASURES

Experience Autism Burbank (PRE)

Informed Consent

∗1. I authorize Lauren Apodaca, Lilian Medina, and Katie Steffan, under the supervision of Dr. Cimbora & Dr. Abouezzeddine of Rosemead School of Psychology, Biola University, La Mirada, California, and/or any designated research assistants to gather information from me on the topic of Law Enforcement attitudes towards autism spectrum disorder, mental illness, and criminals, as well as effectiveness of the Experience Autism training session.

I understand that the general purpose of the research is to evaluate the effectiveness of the Experience Autism training course and to better understand factors that contribute to burnout in police officers, and that I will be asked to fill out questionnaires that will take approximately 30-40 minutes prior to the Experience Autism training. I will also be asked to complete surveys before and after each training module which will take approximately 12 minutes during the 2 hour Experience Autism training. Lastly, I will be asked to take a post test 1-2 weeks after the training which will take approximately 5-10 minutes to complete.

The potential benefits of the study include the possibility to win 1 of 6 $50 Amazon gift cards. Additionally, gain a better understanding of burnout and the factors that contribute to it as well as measuring the effectiveness of the Experience Autism training in hopes of improving the training and subsequently improving law enforcement understanding of autism spectrum disorder.

I am aware that I may choose not to answer any questions that I find embarrassing or offensive.

I understand that my participation is voluntary and that I may refuse to participate or discontinue my participation at any time without penalty or loss of benefits to which I am otherwise entitled.

I understand that if, after my participation, I experience any undue anxiety or stress or have questions about the research or my rights as a participant, that may have been provoked by the experience, Lauren Apodaca, Lilian Medina, and Katie Steffan will be available for consultation, and will also be available to provide direction regarding medical assistance in the unlikely event that physical injury is incurred during participation in the research.

Confidentiality of research results will be maintained by the researchers. My individual

Experience Autism Burbank (PRE)

results will not be released without my written consent.

- [ ] Yes
- [ ] No

Experience Autism Burbank (PRE)

Participant ID

Please create a research participant ID.

Example:

Telephone # = (123)456-7890
Birth Month = March

ID = 789003

***2. Enter the last 4 digits of your phone number followed by your birth month (01-12) below.**

Experience Autism Burbank (PRE)

Gift Card Opportunity

3. I would like to be entered in a drawing to win 1 of 6 $50 Amazon gift cards.

I understand that by providing my phone number AND first name below I am requesting to be added to this drawing.
I also understand that I will be asked to provide my phone number AND first name again during the online post-test after the training in order to be eligible to participate in the drawing.

My contact information will NOT be in any way connected to my survey responses.

I understand that being part of this drawing for 1 of 6 $50 Amazon gift cards is voluntary.

I understand that if I do not enter my phone number AND first name below I do NOT want to be entered to win 1 of 6 $50 Amazon gift cards.

FIRST name

Telephone number

Experience Autism Burbank (PRE)

Demographic Information

4. Are you male or female?

- [ ] Male
- [ ] Female

5. What is your ethnicity? (Please select all that apply.)

- [ ] Caucasian/European American
- [ ] Black/African American
- [ ] Hispanic/ Latino/ Latina
- [ ] Asian/ Asian American
- [ ] Native American/ Alaskan Native

Other (please specify)

6. How many years have you served as a police officer?

7. Primary police duty (e.g. Patrol, supervisory, administrative)

8. Have you received some past training on dealing with emotionally disturbed persons?

- [ ] Yes
- [ ] No

9. Have you had personal experience with someone who has a mental illness outside of work?

- [ ] Yes

Experience Autism Burbank (PRE)

10. How many days per week in the past month have you responded to a call involving an emotionally disturbed person?

- [ ] 0 days
- [ ] 1 day
- [ ] 2 days
- [ ] 3 days
- [ ] 4 days
- [ ] 5 days or more

Experience Autism Burbank (PRE)

Autism Spectrum Disorder (ASD) Section

The following 3 pages will ask you questions about Autism Spectrum Disorder (ASD). Please read each question carefully and select the appropriate answer.

Experience Autism Burbank (PRE)

Autism Spectrum Disorder (ASD) Section

11. In general, do you believe people with ASD are dangerous?

☐ Yes

☐ No

12. Are you closely acquainted with someone diagnosed with ASD outside of work?

☐ Yes

☐ No

13. Have you ever interacted with people with ASD in the course of your work as a police officer?

☐ Yes

☐ No

14. Have you ever received training on ASD before?

☐ Yes

☐ No

15. In general, how would you rate your overall knowledge of ASD?

☐ Poor ☐ Fair ☐ Good ☐ Superior

16. In general, how would you rate your confidence in interacting with people with ASD?

☐ Poor ☐ Fair ☐ Good ☐ Superior

17. In general, how would you rate the practicality of providing accommodations for people with ASD out in the field?

☐ Poor ☐ Fair ☐ Good ☐ Superior

Experience Autism Burbank (PRE)

18. ASD is a mental illness much like schizophrenia or bipolar disorder.

- [ ] True
- [ ] False

19. People with ASD can be recognized by visible facial abnormalities such as thin upper lips.

- [ ] True
- [ ] False

20. 1 in 68 children is diagnosed with ASD.

- [ ] True
- [ ] False

21. ASD is 3 to 4 times more common in girls than in boys.

- [ ] True
- [ ] False

22. People with ASD may be unable to communicate easily using their words.

- [ ] True
- [ ] False

23. People with ASD do not have a problem with normal things in the environment like lights, smells, and textures.

- [ ] True
- [ ] False

24. ASD is a childhood disorder usually outgrown by late adolescence and rarely seen in adulthood.

- [ ] True
- [ ] False

25. The symptoms of ASD can be developmental or neurological.

- [ ] True

Experience Autism Burbank (PRE)

26. Symptoms of ASD may cause problems with thinking, feeling, language, and the ability to relate to others.

- [ ] True
- [ ] False

27. ASD can be successfully treated with medication and therapy.

- [ ] True
- [ ] False

28. ASD affects all individuals the same way and the severity of the symptoms is comparable across people diagnosed with the disorder.

- [ ] True
- [ ] False

29. In general, fine and gross motor skills are not a problem for people with ASD.

- [ ] True
- [ ] False

30. People with ASD like routines, so they should have no trouble following a common routine like cooperating during an arrest

- [ ] True
- [ ] False

31. People with ASD have trouble making eye to eye contact, reading facial expressions, and interpreting body language.

- [ ] True
- [ ] False

32. Providing accommodations for people with Autism is a type of preferential treatment for people with disabilities.

- [ ] True
- [ ] False

Experience Autism Burbank (PRE)

33. Research shows that most people with ASD are of lower socio-economic status.

- [ ] True
- [ ] False

34. People with ASD are socially awkward and cannot change their behavior by watching others.

- [ ] True
- [ ] False

35. Self-discipline and will power can help people with ASD decrease their behavioral issues.

- [ ] True
- [ ] False

36. Most people with ASD have very little intellectual ability.

- [ ] True
- [ ] False

37. People with ASD may not understand the "cause and effect" and consequences of their actions.

- [ ] True
- [ ] False

38. In an emergency, people with ASD always understand that law enforcement officers are there to help and keep everyone safe.

- [ ] True
- [ ] False

Experience Autism Burbank (PRE)

Autism Spectrum Disorder (ASD) Section

Please read the story and answer the questions below.

You are called to investigate the presence of a suspicious person disturbing the peace in a quiet neighborhood at 9 p.m. When you arrive on scene, you find a male in his early twenties pacing the sidewalk while yelling out wordlessly, producing odd throaty sounds and flapping his hands nonstop. He does not appear to be armed, but he does not respond when you or your partner ask him to stand still. In fact, he appears to be ignoring all of your directions about how to behave in the situation.

39. In general, how would you rate your confidence in handling this situation?

☐ Poor ☐ Fair ☐ Good ☐ Superior

40. In general, how would you rate your knowledge to make accommodations for this person?

☐ Poor ☐ Fair ☐ Good ☐ Superior

41. How nervous does this situation make you?

☐ Not Nervous ☐ Slightly Nervous ☐ Moderately Nervous ☐ Highly Nervous

42. Would you accept the help of someone who claims to be the young man's caregiver in this situation?

☐ Yes

☐

Global Posttest Measures

Experience Autism Training 2015 POST-Quiz

Informed Consent

I authorize Lauren Apodaca, Lilian Medina, and Katie Steffan, under the supervision of Dr. Cimbora & Dr. Abouezzeddine of Rosemead School of Psychology, Biola University, La Mirada, California, and/or any designated research assistants to gather information from me on the topic of Law Enforcement attitudes towards autism spectrum disorder as well as effectiveness of the Experience Autism training session.

I understand that the general purpose of the research is to evaluate the effectiveness of the Experience Autism training course and that I will be asked to fill out questionnaires that will take approximately 5-10 minutes prior to the Experience Autism training. I will also be asked to complete surveys before and after each training module which will take approximately 12 minutes during the 2 hour Experience Autism training. Lastly, I will be asked to take a post test 1-2 weeks after the training which will take approximately 5-10 minutes to complete.

The potential benefits of the study include the possibility to win 1 of 6 $50 Amazon gift cards. Additionally, the assessments will measure the effectiveness of the Experience Autism training in hopes of improving the training and subsequently improving law enforcement understanding of autism spectrum disorder.

I am aware that I may choose not to answer any questions that I find embarrassing or offensive.

I understand that my participation is voluntary and that I may refuse to participate or discontinue my participation at any time without penalty or loss of benefits to which I am otherwise entitled.

I understand that if, after my participation, I experience any undue anxiety or stress or have questions about the research or my rights as a participant, that may have been provoked by the experience, Lauren Apodaca, Lilian Medina, and Katie Steffan will be available for consultation, and will also be available to provide direction regarding medical assistance in the unlikely event that physical injury is incurred during participation in the research.

Confidentiality of research results will be maintained by the researchers. My individual results will not be released without my written consent.

***1. I consent to the research conditions specified above.**

☐ Yes

☐ No

Experience Autism Training 2015 POST-Quiz

Participant ID

Please create a research

participant ID. Example:

Telephone # = (123)456-7890
Birth Month = March

ID = 789003

Note: Please enter the same ID you used for the pre-quiz and the mini quizzes on training day.

2. Enter the last 4 digits of your phone number followed by your birth month (01-12) below.

Experience Autism Training 2015 POST-Quiz

3. I would like to be entered in a drawing to win 1 of 6 $50 Amazon gift cards.

I understand that by providing my phone number AND first name below I am requesting to be added to
this drawing. I also understand that I will be asked to provide my phone number AND first name again
during the online POST-TEST after the training in order to be eligible to participate in the drawing.

My contact information will NOT be in any way connected to my survey responses.

I understand that being part of this drawing for 1 of 6 $50 Amazon gift cards is voluntary.
I understand that if I do not enter my phone number AND first name below I do NOT want to be entered to win 1 of 6 $50 Amazon gift cards.

FIRST name

Telephone number

Experience Autism Training 2015 POST-Quiz

Autism Spectrum Disorder (ASD)

The following 4 pages will ask you questions about Autism Spectrum Disorder (ASD). Please read each question carefully and select the appropriate answer.

Experience Autism Training 2015 POST-Quiz

Autism Spectrum Disorder (ASD)

4. In general, do you believe people with ASD are dangerous?

☐ Yes

☐ No

5. Are you closely acquainted with someone diagnosed with ASD outside of work?

☐ Yes

☐ No

6. Have you ever interacted with people with ASD in the course of your work as a police officer?

☐ Yes

☐ No

7. Have you ever received training on ASD before?

☐ Yes

☐ No

8. In general, how would you rate your overall knowledge of ASD?

☐ Poor ☐ Fair ☐ Good ☐ Superior

9. In general, how would you rate your confidence in interacting with people with ASD?

☐ Poor ☐ Fair ☐ Good ☐ Superior

10. In general, how would you rate the practicality of providing accommodations for people with ASD out in the field?

☐ Poor ☐ Fair ☐ Good ☐ Superior

Experience Autism Training 2015 POST-Quiz

11. ASD is a mental illness much like schizophrenia or bipolar disorder.

- ☐ True
- ☐ False

12. People with ASD can be recognized by visible facial abnormalities such as thin upper lips.

- ☐ True
- ☐ False

13. 1 in 68 children is diagnosed with ASD.

- ☐ True
- ☐ False

14. ASD is 3 to 4 times more common in girls than in boys.

- ☐ True
- ☐ False

15. People with ASD may be unable to communicate easily using their words.

- ☐ True
- ☐ False

16. People with ASD do not have a problem with normal things in the environment like lights, smells, and textures.

- ☐ True
- ☐ False

17. ASD is a childhood disorder usually outgrown by late adolescence and rarely seen in adulthood.

- ☐ True
- ☐ False

18. The symptoms of ASD can be developmental or neurological.

- ☐ True
- ☐ False

Experience Autism Training 2015 POST-Quiz

19. Symptoms of ASD may cause problems with thinking, feeling, language, and the ability to relate to others.

- ☐ True
- ☐ False

20. ASD can be successfully treated with medication and therapy.

- ☐ True
- ☐ False

21. ASD affects all individuals the same way and the severity of the symptoms is comparable across people diagnosed with the disorder.

- ☐ True
- ☐ False

22. In general, fine and gross motor skills are not a problem for people with ASD.

- ☐ True
- ☐ False

23. People with ASD like routines, so they should have no trouble following a common routine like cooperating during an arrest

- ☐ True
- ☐ False

24. People with ASD have trouble making eye to eye contact, reading facial expressions, and interpreting body language.

- ☐ True
- ☐ False

25. Providing accommodations for people with Autism is a type of preferential treatment for people with disabilities.

- ☐ True
- ☐ False

Experience Autism Training 2015 POST-Quiz

26. Research shows that most people with ASD are of lower socio-economic status.

☐ True

☐ False

27. People with ASD are socially awkward and cannot change their behavior by watching others.

☐ True

☐ False

28. Self-discipline and will power can help people with ASD decrease their behavioral issues.

☐ True

☐ False

29. Most people with ASD have very little intellectual ability.

☐ True

☐ False

30. People with ASD may not understand the "cause and effect" and consequences of their actions.

☐ True

☐ False

31. In an emergency, people with ASD always understand that law enforcement officers are there to help and keep everyone safe.

☐ True

☐ False

Experience Autism Training 2015 POST-Quiz

Autism Spectrum Disorder (ASD)

Please read the story and answer the questions below.

You are called to investigate the presence of a suspicious person disturbing the peace in a quiet neighborhood at 9 p.m. When you arrive on scene, you find a male in his early twenties pacing the sidewalk while yelling out wordlessly, producing odd throaty sounds and flapping his hands nonstop. He does not appear to be armed, but he does not respond when you or your partner ask him to stand still. In fact, he appears to be ignoring all of your directions about how to behave in the situation.

32. In general, how would you rate your confidence in handling this situation?

☐ Poor ☐ Fair ☐ Good ☐ Superior

33. In general, how would you rate your knowledge to make accommodations for this person?

☐ Poor ☐ Fair ☐ Good ☐ Superior

34. How nervous does this situation make you?

☐ Not Nervous ☐ Slightly Nervous ☐ Moderately Nervous ☐ Highly Nervous

35. Would you accept the help of someone who claims to be the young man's caregiver in this situation?

☐ Yes

Experience Autism Training 2015 POST-Quiz

Experience Autism Training Evaluation

36. How relevant was Experience Autism training to your work as a police officer?

☐ Not Relevant ☐ Slightly Relevant ☐ Moderately Relevant ☐ Highly Relevant

37. Has Experience Autism training helped you feel more prepared to interact with people With ASD on the job?

☐ Yes

☐ No

38. Which station did you find the most useful and why?

39. What can we do to improve Experience Autism training?

Experience Autism Training 2015 POST-Quiz

Thank you for your participation.

END OF SURVEY

APPENDIX B

IN-STATION MEASURES

Clip It **Autism Spectrum Disorder (ASD)**

A _____ / _____

(Last 4 of your phone #) (Birth Month # 01-12)

Rate these items using the following scale: Poor Fair Good Great 0 1 2 3	**Poor**	**Fair**	**Good**	**Superior**
Rate your **knowledge** of fine and gross motor skills as it relates to people with ASD	0	1	2	3
Rate your **knowledge** of touch sensitivity as it relates to people with ASD	0	1	2	3

Please Read Each Statement Carefully **Circle** whether you think it is *true* or *false*	**True**	**False**
1. People with ASD are always able to manipulate objects easily	T	F
2. Fine and gross motor skills are not typical problems for people with ASD	T	F
3. People with ASD can be either too sensitive or too insensitive to touch	T	F
4. People with ASD are able to move their hands and bodies quickly as directed	T	F
5. Commands like “lay on the ground” may be difficult to do for people with ASD	T	F
6. Struggling while wearing handcuffs always shows defiance in people with ASD	T	F
7. It is helpful to slow things down and provide more time to people with ASD	T	F
8. It is helpful to allow caregivers to help when interacting with people with ASD	T	F

Rate your **knowledge** of hand dexterity and hand manipulation skills as it relates to people with ASD	0	1	2	3

PRETEST

Clip It **Autism Spectrum Disorder (ASD)**

F _____ / _____

(Last 4 of your phone #) (Birth Month # 01-12)

Rate these items using the following scale: Poor Fair Good Great 0 1 2 3	**Poor**	**Fair**	**Good**	**Superior**
After this training, rate your **knowledge** of fine and gross motor skills as it relates to people with ASD	0	1	2	3
After this training, rate your **knowledge** of touch sensitivity as it relates to people with ASD	0	1	2	3
After this training, rate your **knowledge** of hand dexterity and hand manipulation skills as it relates to people with ASD	0	1	2	3
Rate the **practicality** of using the tips you learned during this station in the field	0	1	2	3
Rate your **confidence** in using the tips you learned during this station in the field	0	1	2	3

Please Read Each Statement Carefully **Circle** whether you think it is *true* or *false*	**True**	**False**
1. People with ASD are always able to manipulate objects easily	T	F
2. Fine and gross motor skills are not typical problems for people with ASD	T	F
3. People with ASD can be either too sensitive or too insensitive to touch	T	F
4. People with ASD are able to move their hands and bodies quickly as directed	T	F
5. Commands like “lay on the ground” may be difficult to do for people with ASD	T	F
6. Struggling while wearing handcuffs always shows defiance in people with ASD	T	F
7. It is helpful to slow things down and provide more time to people with ASD	T	F
8. It is helpful to allow caregivers to help when interacting with people with ASD	T	F

Post-Test

Write On **Autism Spectrum Disorder (ASD)**

B _____ / _____

(Last 4 of your phone #) (Birth Month # 01-12)

Rate these items using the following scale: Poor Fair Good Great 0 1 2 3	**Poor**	**Fair**	**Good**	**Superior**
Rate your **knowledge** of how a person with ASD understands information.	0	1	2	3

Please Read Each Statement Carefully **Circle** whether you think it is *true* or *false*	**True**	**False**
1. People with ASD do not have the ability to easily understand verbal, social, sensory, and other types of information	T	F
2. People with ASD are able to make up for processing impairments without any help by focusing and trying really hard	T	F
3. Providing rapid instructions and speeding up proceedings helps reduce stress for people with ASD	T	F
4. Processing problems can cause delays in response and confusion in people with ASD	T	F
5. People with ASD often ask for help if they are confused about what to do	T	F
6. People with ASD do not benefit from being shown what to do	T	F
7. Confusion in people with ASD might look like resistance, substance abuse or mental illness	T	F
8. People with ASD do not experience anger or frustration when they cannot do something	T	F

PRETEST

Write On **Autism Spectrum Disorder (ASD)**

B _____ / _____

(Last 4 of your phone #) (Birth Month # 01-12)

Rate these items using the following scale: Poor Fair Good Great 0 1 2 3	**Poor**	**Fair**	**Good**	**Superior**
After this training, rate your **knowledge** of how a person with ASD understands information.	0	1	2	3
Rate the **practicality** of using the tips you learned during this station in the field	0	1	2	3
Rate your **confidence** in using the tips you learned during this station in the field	0	1	2	3

Please Read Each Statement Carefully **Circle** whether you think it is *true* or *false*	**True**	**False**
1. People with ASD do not have the ability to easily understand verbal, social, sensory, and other types of information	T	F
2. People with ASD are able to make up for processing impairments without any help by focusing and trying really hard	T	F
3. Providing rapid instructions and speeding up proceedings helps reduce stress for people with ASD	T	F
4. Processing problems can cause delays in response and confusion in people with ASD	T	F
5. People with ASD often ask for help if they are confused about what to do	T	F
6. People with ASD do not benefit from being shown what to do	T	F
7. Confusion in people with ASD might look like resistance, substance abuse or mental illness	T	F
8. People with ASD do not experience anger or frustration when they cannot do something	T	F

Post-Test

The Envelope Please **Autism Spectrum Disorder (ASD)**

C _____ / _____

(Last 4 of your phone #) (Birth Month # 01-12)

Rate these items using the following scale: Poor Fair Good Great 0 1 2 3	**Poor**	**Fair**	**Good**	**Superior**
Rate your **knowledge** of social impairments as it relates to people with ASD	0	1	2	3

Please Read Each Statement Carefully **Circle** whether you think it is *true* or *false*	**True**	**False**
1. People with ASD have no trouble automatically understanding social situations if the situation is clear and they are provided with multiple social cues	T	F
2. People with ASD are able to make up for their social impairments by watching and copying others	T	F
3. Social problems are a core symptom in ASD	T	F
4. People with ASD are able to understand others' perspectives, thoughts, feelings, and expectations	T	F
5. People with ASD know how to show respect and cooperate with authority figures	T	F
6. All individuals with ASD have the same level of social functioning	T	F
7. Identifying individual interests in people with ASD can help build an allegiance	T	F
8. People with ASD can tell when they have said or done the wrong thing in a social situation	T	F

PRETEST

The Envelope Please **Autism Spectrum Disorder (ASD)**

C _____ / _____

(Last 4 of your phone #) (Birth Month # 01-12)

Rate these items using the following scale: Poor Fair Good Great 0 1 2 3	**Poor**	**Fair**	**Good**	**Superior**
After this training, rate your **knowledge** of social impairments as it relates to people with ASD	0	1	2	3
Rate the **practicality** of using the tips you learned during this station in the field	0	1	2	3
Rate your **confidence** in using the tips you learned during this station in the field	0	1	2	3

Please Read Each Statement Carefully **Circle** whether you think it is *true* or *false*	**True**	**False**
1. People with ASD have no trouble automatically understanding social situations if the situation is clear and they are provided with multiple social cues	T	F
2. People with ASD are able to make up for their social impairments by watching and copying others	T	F
3. Social problems are a core symptom in ASD	T	F
4. People with ASD are able to understand others' perspectives, thoughts, feelings, and expectations	T	F
5. People with ASD know how to show respect and cooperate with authority figures	T	F
6. All individuals with ASD have the same level of social functioning	T	F
7. Identifying individual interests in people with ASD can help build an allegiance	T	F
8. People with ASD can tell when they have said or done the wrong thing in a social situation	T	F

Post-Test

Say What? **Autism Spectrum Disorder (ASD)**

D _____ / _____

(Last 4 of your phone #) (Birth Month # 01-12)

Rate these items using the following scale: Poor Fair Good Great 0 1 2 3	**Poor**	**Fair**	**Good**	**Superior**
Rate your **knowledge** of delays in language processing as it relates to people with ASD	0	1	2	3

Please Read Each Statement Carefully **Circle** whether you think it is *true* or *false*	**True**	**False**
1. If you say "It is raining cats and dogs", people with ASD may look around for the animals	T	F
2. Providing more time to answer questions to people with ASD always results in clear replies with proper grammar.	T	F
3. Echolalia is the automatic repetition of movements often typical in people with ASD	T	F
4. About 50% of people with Autism are not able to speak	T	F
5. People with ASD typically speak in an overly animated, enthusiastic tone of voice	T	F
6. Many people with Autism do better with visual information because it helps them process what they hear	T	F
7. People with ASD may make noises or repeat words out of context	T	F
8. People with ASD have a harder time communicating as their stress increases	T	F

PRETEST

Say What? **Autism Spectrum Disorder (ASD)**

D _____ / _____

(Last 4 of your phone #) (Birth Month # 01-12)

Rate these items using the following scale: Poor Fair Good Great 0 1 2 3	**Poor**	**Fair**	**Good**	**Superior**
After this training, rate your **knowledge** of delays in language processing as it relates to people with ASD	0	1	2	3
Rate the **practicality** of using the tips you learned during this station in the field	0	1	2	3
Rate your **confidence** in using the tips you learned during this station in the field	0	1	2	3

Please Read Each Statement Carefully **Circle** whether you think it is *true* or *false*	**True**	**False**
1. If you say "It is raining cats and dogs", people with ASD may look around for the animals	T	F
2. Providing more time to answer questions to people with ASD always results in clear replies with proper grammar.	T	F
3. Echolalia is the automatic repetition of movements often typical in people with ASD	T	F
4. About 50% of people with Autism are not able to speak	T	F
5. People with ASD typically speak in an overly animated, enthusiastic tone of voice	T	F
6. Many people with Autism do better with visual information because it helps them process what they hear	T	F
7. People with ASD may make noises or repeat words out of context	T	F
8. People with ASD have a harder time communicating as their stress level increases	T	F

Post-Test

Chaos **Autism Spectrum Disorder (ASD)**

E _____ / _____

(Last 4 of your phone #) (Birth Month # 01-12)

Rate these items using the following scale: Poor Fair Good Great 0 1 2 3	**Poor**	**Fair**	**Good**	**Superior**
Rate your **knowledge** of sensory overload as it relates to people with ASD	0	1	2	3

Please Read Each Statement Carefully **Circle** whether you think it is *true* or *false*	**True**	**False**
1. People with ASD can tune out sensory overload and will not try to escape, fight, or avoid the thing that is bothering them	T	F
2. It is helpful if an officer tells someone with ASD to ignore everything around them	T	F
3. People with ASD may bite themselves to get more sensory input	T	F
4. Rocking, flapping, and pacing are signs that a person with ASD is about to fight	T	F
5. Patrol car lights, radios, and sirens are not bothersome to people with ASD because they are familiar with them	T	F
6. Sensory overload behavior is instinctual reaction, not bad behavior	T	F
7. People with ASD can be over-sensitive to information from the five senses (sight, hearing, touch, taste, smell	T	F
8. People with ASD need extra space when overwhelmed because touch may make it worse	T	F

PRETEST

Chaos **Autism Spectrum Disorder (ASD)**

E _____ / _____

(Last 4 of your phone #) (Birth Month # 01-12)

Rate these items using the following scale: Poor Fair Good Great 0 1 2 3	**Poor**	**Fair**	**Good**	**Superior**
After this training, rate your **knowledge** of sensory overload as it relates to people with ASD	0	1	2	3
Rate the **practicality** of using the tips you learned during this station in the field	0	1	2	3
Rate your **confidence** in using the tips you learned during this station in the field	0	1	2	3

Please Read Each Statement Carefully **Circle** whether you think it is *true* or *false*	**True**	**False**
1. People with ASD can tune out sensory overload and will not try to escape, fight, or avoid the thing that is bothering them	T	F
2. It is helpful if an officer tells someone with ASD to ignore everything around them	T	F
3. People with ASD may bite themselves to get more sensory input	T	F
4. Rocking, flapping, and pacing are signs that a person with ASD is about to fight	T	F
5. Patrol car lights, radios, and sirens are not bothersome to people with ASD because they are familiar with them	T	F
6. Sensory overload behavior is instinctual reaction, not bad behavior	T	F
7. People with ASD can be over-sensitive to information from the five senses (sight, hearing, touch, taste, smell	T	F
8. People with ASD need extra space when overwhelmed because touch may make it worse	T	F

Post-Test

Do you read me? **Autism Spectrum Disorder (ASD)**

F _____ / _____

(Last 4 of your phone #) (Birth Month # 01-12)

Rate these items using the following scale: Poor Fair Good Great 0 1 2 3	**Poor**	**Fair**	**Good**	**Superior**
Rate your **knowledge** of body language and facial expressions as it relates to people with ASD	0	1	2	3

Please Read Each Statement Carefully **Circle** whether you think it is *true* or *false*	**True**	**False**
1. People with ASD are able to read angry faces, but not happy faces in social situations	T	F
2. People with ASD have very expressive, easy to read faces	T	F
3. People with ASD have the ability to read nonverbal cues like body language	T	F
4. People with ASD can be easily manipulated because they cannot read the bad intentions of other people	T	F
5. People with ASD cannot feel positive or negative emotions	T	F
6. People with ASD have the ability to transition smoothly between different social situations	T	F
7. People with ASD are at a social disadvantage because they cannot relate to others	T	F
8. Using words in addition to nonverbal communication can be helpful in interacting with people with ASD	T	F

PRETEST

Do you read me? **Autism Spectrum Disorder (ASD)**

F _____ / _____

(Last 4 of your phone #) (Birth Month # 01-12)

Rate these items using the following scale: Poor Fair Good Great 0 1 2 3	**Poor**	**Fair**	**Good**	**Superior**
After this training, rate your **knowledge** of body language and facial expressions as it relates to people with ASD	0	1	2	3
Rate the **practicality** of using the tips you learned during this station in the field	0	1	2	3
Rate your **confidence** in using the tips you learned during this station in the field	0	1	2	3

Please Read Each Statement Carefully **Circle** whether you think it is *true* or *false*	**True**	**False**
1. People with ASD are able to read angry faces, but not happy faces in social situations	T	F
2. People with ASD have very expressive, easy to read faces	T	F
3. People with ASD have the ability to read nonverbal cues like body language	T	F
4. People with ASD can be easily manipulated because they cannot read the bad intentions of other people	T	F
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6. People with ASD have the ability to transition smoothly between different social situations	T	F
7. People with ASD are at a social disadvantage because they cannot relate to others	T	F
8. Using words in addition to nonverbal communication can be helpful in interacting with people with ASD	T	F

Post-Test

VITA

NAME:

Lilian Aracely Medina Del Rio, M.A.

EDUCATION:

Rosemead School of Psychology Clinical Psychology (APA Accredited)	Psy.D.	(Cand.)
Rosemead School of Psychology Clinical Psychology (APA Accredited)	M.A.	2015
University of California, Los Angeles Anthropology (Major); Spanish (Minor)	B.A.	2010

APA ACCREDITED INTERNSHIP:

VA Pacific Islands Healthcare System Honolulu, HI	2017 -	2018

PRACTICA:

VA Long Beach Healthcare System Outpatient & Inpatient Programs	2016 -	2017
Didi Hirsch Mental Health Services Outpatient Program	2015 -	2016
Biola Counseling Center Outpatient Program	2014 -	2015

EMPLOYMENT:

Harbor-UCLA Medical Center (APA Accredited) Assertive Community Treatment/Corrections Fellow	2018	(Exp.)
Biola Counseling Center Staff Therapist	2016 -	2017
Aftercare Research Center at UCLA Staff Research Associate II	2010 -	2013