AN EXPLORATION OF LAW ENFORCEMENT OFFICERS' TRAINING NEEDS AND INTERACTIONS WITH INDIVIDUALS WITH AUTISM SPECTRUM DISORDER

There has been an emphasis placed on forming relationships between law enforcement officials (LEOs) and the community, including members with physical, intellectual, emotional, and social disabilities/concerns.

This research examined perspectives of LEOs and members of the autism spectrum disorder (ASD) community. The purpose was to understand interactions between LEOs and individuals with ASD as well as to better understand recommendations and needs for LEO training on ASD. Primary research questions included: (1) What are LEOs' previous experiences with and perceptions of individuals with ASD and what ASD training recommendations do they suggest? & (2) What perceptions do adults with ASD and caregivers report regarding potential or actual interactions with law enforcement and what recommendations for LEO training do they offer?

The researchers examined data from 17 different participants: six LEOs, six autistic individuals, and five caregivers. A series of semi-structured interviews and questionnaires were utilized to collect data. Example quotes fall below.

LEO

"I mean I would think he looks like he is on drugs if he is doing that with his hands."

Autistic Perspective

"They might think, she's on drugs, she's doing something bad you know, if they see me having an anxiety attack."

Caregiver

"My son may do the flapping around. And of course, someone can see that and think, well, they're on drugs, they're you know, drunk, and then it can get ugly."

The 4 most important needs to support interactions between LEOs and the autism community were: (1) awareness of potential misinterpretation of behavior of individuals with ASD, (2) a universal ASD identification system/symbol (that is not mandatory), (3) interactive, mandatory training unique to LEOs' Needs and Roles, and (4) community connections between LEOs and the ASD community.

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ORIGINAL PAPER

An Exploration of Law Enforcement Officers' Training Needs and Interactions with Individuals with Autism Spectrum Disorder

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Abstract

Semi-structured interviews were employed to (a) characterize LEOs' knowledge of ASD, (b) understand interactions between LEOs and individuals with ASD, and (c) identify training needs to prepare LEOs for interactions with the ASD community. Researchers utilized a constructivist grounded theory approach to analyze data from 17 participants: (a) six LEOs, (b) six adults with ASD, and (c) five caregivers. Common themes included the (a) potential for misinterpretations of behavior of individuals with ASD; (b) helpfulness of an identification system/symbol for ASD; (c) need for interactive, mandatory training unique to LEOs' needs; and, (d) importance of building community connections between LEOs and individuals with ASD. Findings are discussed within the context of previous research related to law enforcement and ASD.

Keywords Autism · Police officer · Law enforcement · Training · Interactions · Knowledge · Grounded theory

After the establishment of the Community Oriented Policing Services (COPS) model within the United States Department of Justice in 1994, law enforcement agencies across the United States have placed increasing emphasis on building relationships with all community members, including those who may differ physically, intellectually, emotionally, and socially from individuals without disabilities or behavioral/

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mental health concerns (Bureau of Justice Assistance 1994; Price 2005). Applying the COPS model, law enforcement officers (LEOs) would benefit from increased knowledge and interactions with individuals with autism spectrum disorder (ASD). In addition, LEOs are likely to interact with individuals with ASD given that the current prevalence rate of ASD is now estimated at 1 in 59 children (Baio et al. 2018). As children with ASD grow into adulthood, the likelihood that LEOs will encounter them is increasing. Unfortunately, several encounters between LEOs and individuals with ASD have ended in negative outcomes such as arrest or even death (Blasius 2016; Copenhaver and Tewksbury 2018; Karimi 2016; Lutz and Johnson 2012). Reports from the ASD community regarding involvement with LEOs emphasizes the need to conduct research to explore these interactions, with only 13% of caregivers of individuals with ASD and 15% of adults with ASD reporting a "satisfactory experience" with LEOs (Crane et al. 2016).

Research suggests that individuals with ASD are involved in interactions with LEOs as victims, suspects, and in routine daily police contact with community citizens (Woodbury-Smith and Dein 2014). Specifically, individuals with ASD who exhibit unusual behaviors (e.g., hand flapping, pacing, self-harming) or elopement in the community have higher chances of encountering LEOs and being arrested (Debbaudt and Rothman 2001). During interactions, LEOs may misinterpret the behavior of

individuals with ASD as challenging or disrespectful, which may help explain the rising number of incidents involving individuals with disabilities and the criminal justice system (Rava et al. 2017).

LEOs' Knowledge of ASD

Although interactions between LEOs and individuals with ASD have increased, a few studies reveal that LEOs are often not knowledgeable about ASD (Chown 2009; Crane et al. 2016). To identify characteristics of ASD, it is essential that LEOs become aware of the range of symptoms individuals with ASD may present. After surveying 124 LEOs in the United States, Modell and Mak (2008) found that only 20% of LEOs could identify defining features of ASD. In addition, 35% of the sample reported simply associating ASD with the film "Rain Man." In the same study, researchers suggested that while many LEOs may be able to correctly identify key characteristics of disabilities, some are unable to distinguish between behaviors and symptoms associated with different disability groups (Modell and Mak 2008).

Law Enforcement ASD-Specific Training

In order to increase awareness of ASD and prepare LEOs for interactions with individuals with ASD, law enforcement departments should receive formalized ASD-specific training. Laan et al. (2013) analyzed the quality of ASD-specific training curricula in seven states in the southeastern region of the United States using Debbaudt's (2006) recommendations. Results of the content analysis concluded that each state provided ASD-specific training that were inconsistent with expert guidelines and more limited in content than recommended (Laan et al. 2013). In another study, 23% of agencies in New Jersey had not provided ASD-specific training by Fall 2014 despite the 2008 statewide mandate for all LEOs to receive ASD training (Kelly and Hassett-Walker 2016). In addition, only 37% of LEOs in England and Wales reported that they previously have received ASD-specific training, and over 25% of those LEOs reported dissatisfaction with training (Crane et al. 2016). In sum, combined research highlights the need for ASD-specific training to be delivered to all LEOs as well as for curriculum and materials to be updated to reflect current needs of LEOs and ASD community. Due to the variability in type and quantity of training, it is difficult to determine which components and learning methods produce the most substantial improvements related to LEOs' behavior during interactions with individuals with ASD.

Purpose of the Study

The current exploratory study examined the perspectives of multiple stakeholders, including LEOs, caregivers of individuals with ASD, and adults with ASD, to better understand their interactions with one another as well as to obtain recommendations to inform ASD-specific training. A qualitative methodology was chosen due to limited research in this area and to gather rich, descriptive data. Given the importance of including the ASD community in research (Pellicano et al. 2014), input was obtained from interviews with individuals with ASD and caregivers rather than information solely from LEOs. The following research questions guided the study: (a) What are LEOs' previous experiences with and perceptions of individuals with ASD and what ASD-specific training recommendations do they provide?, (b) What perceptions do adults with ASD report regarding potential/actual interactions with law enforcement and what recommendations for police officer training do they offer?, and (c) What perceptions do caregivers have regarding their children's potential/actual interactions with LEOs and what LEO training recommendations do they offer?

Method

Participants

All participants were recruited from the Southeastern United States via email and social media, often with the help of local autism advocacy organizations. Six adults with ASD, five caregivers of children with ASD, and six LEOs participated in the study. Demographic information appears in Table 1. Inclusion criteria for LEOs were as follows: (a) minimum of 18 years of age, (b) currently serving as a LEO, (c) previous experience with someone believed to have ASD based on LEO self-report, and (d) ability to use English fluently. Inclusion criteria for adults with ASD were as follows: (a) current diagnosis of ASD confirmed via the Social Responsiveness Scale-Second Edition, Self-Report (SRS-2; Constantino and Gruber 2012), (b) minimum of 18 years of age, (c) ability to understand and speak English, and (d) cognitive capability to provide research consent and participate in an interview based on the University of California San Diego Brief Assessment of Capacity to Consent (UBACC; Jeste et al. 2007). Inclusion criteria for caregivers were as follows: (a) minimum of 18 years old and child with ASD who is at least 5 years old, (b) diagnosis of ASD confirmed by the Social Communication Questionnaire (SCQ; Rutter

Table 1 Demographic summary table

Participant characteristics	Adults with ASD	Caregivers	LEOs
N	6	5	6
Age	*M* = 28.3 years Range = 19–52 years	*M* = 44.2 years Range = 31–63 years	*M* = 37.5 years Range = 24–52 years
Gender	Female = 2 (33.3%) Male = 4 (66.7%)	Female = 4 (80%) Male = 1 (20%)	Female = 1 (16.7%) Male = 5 (83.3%)
Identified ethnicity	White = 5 (83.3%) Two or more races = 1(16.7%)	White = 4 (80%) Two or more races = 1 (20%)	White = 6 (100%)
Highest level of schooling	High school diploma = 1 (16.7%) Some high school = 1 (16.7%) Some college = 2 (33.3%) Bachelor's degree = 1 (16.7%) Master's degree = 1 (16.7%)	High school diploma = 1(20%) Bachelor's degree = 2 (40%) Master's degree = 1 (20%) Professional degree = 1 (20%)	Bachelor's degree = 6 (100%)
Total household income (per year)	< $10,000 = 4 (66.7%) $10,000–19,000 = 1 (16.7%) $20,000–29,000 = 1 (16.7%)	$50,000–59,000 = 1 (20%) $60,000–69,000 = 3 (60%) $150,000–249,000 = 1 (20%)	$40,000–49,000 = 2 (33.3%) $60,000–69,000 = 1 (16.7%) $70,000–79,000 = 1 (16.7%) $90,000–99,000 = 2 (33.3%)
Living accommodations (of self or of child with ASD)	College dorm = 2 (33.3%) Residential living community = 1 (16.7%) Rents own apartment = 2 (33.3%) Caregivers' home = 1 (16.7%)	*Children's living accommodations* Parent's home = 4 (80%) College dorm = 1 (20%)	–
ASD diagnosis confirmation (with *Social Responsiveness Scale—Second Edition* or *Social Communication Questionnaire*)	*Self-report SRS-2* Mild range = 1 (16.7%) Moderate range = 5	*SCQ scores of children (cutoff = 15)* 16–20 = 1 (20%) 21–25 = 1 (20%) 26–30 = 3 (60%)	–

et al. 2003), and (c) ability to use English fluently. To understand a diverse range of experiences, we sampled caregivers of children who are nonverbal based on parent report. Of note, we did not require adults with ASD to have prior contact with LEOs in order to potentially explore the reasons why adults with ASD may not have interacted with LEOs previously (e.g., avoidance, anxiety), if participants shared that information.

Measures

Interview Schedules

The law enforcement interview schedule (LEIS) was used to understand LEOs' knowledge of ASD, previous interactions with persons with ASD, and recommendations for ASD-related training and supporting with individuals with ASD. The adult interview schedule (AIS) and caregiver interview schedule (CIS) were developed and used to better understand the perceptions of the ASD community regarding interactions with LEOs. Caregivers and adults with ASD described any previous encounters with law enforcement and provided input regarding future LEO training related to ASD. If caregivers and adults with ASD did not report previous encounters with law enforcement, then they described their perceptions of potential interactions with LEOs.

Demographic Questionnaires

Demographic questionnaires were used to gather information from each of the respective groups. See Table 1 for demographic information.

Social Responsiveness Scale-Second Edition

The SRS-2 (Constantino and Gruber 2012) was used to confirm ASD diagnoses for adults with ASD. The SRS-2 is a 65-item rating scale used to identify the presence and severity of social impairment within the autism spectrum in individuals ages 2.5 years through adulthood. A T score of 60 or above was used to confirm ASD diagnosis.

Social Communication Questionnaire

The SCQ (Rutter et al. 2003) is a 40-item screening tool for children at risk of developmental problems. In the current study, caregivers completed the SCQ, which contains items related to reciprocal social interaction, language and communication, and repetitive and stereotyped patterns of behavior. A raw score of 15 or above was used to confirm ASD diagnosis.

University of California San Diego Brief Assessment of Capacity to Consent

The UBACC is a 10-item scale that includes questions related to an understanding and appreciation of the information concerning a research protocol (Jeste et al. 2007). After participants reviewed the consent form, they completed the UBACC. Each item was scored on a scale of 0 to 2 points, with 0 reflecting a 'clearly incapable' response and 2 indicating a 'clearly capable' response; furthermore, a score of 1 was used for 'partially appropriate responses.' UBACC scores range from 0 to 20, and participants scoring above 15 were deemed eligible for participation.

Procedure

Institutional Review Board approval was secured prior to initiation of the research. Caregiver and LEO data collection consisted of one meeting with the researcher whereas adults with ASD met the researcher two times. During the first meeting, adults with ASD completed the UBACC, signed the consent form, answered the demographic questionnaire, completed the SRS-2 measure, described any accommodations needed for the interview, and scheduled a second meeting. During the next meeting, adults with ASD completed semi-structured interviews with necessary accommodations (e.g., increased use of breaks). All participants were compensated $30 for their time.

The first author conducted all interviews in public library meeting rooms. Semi-structured interviews were used to allow for flexibility and conversational style (Creswell 2007). Before data collection began, interview protocols were piloted with respective participant groups. Interviews lasted between 35 and 106 min and adhered to parallel interview schedules. All interviews were audio recorded, transcribed verbatim, de-identified, thematically coded, and summarized per constructivist grounded theory (CGT; Charmaz 2014). To allow for member checking, participants were offered the option to provide feedback on their transcribed interview, which ensured theoretical sampling occurred to support data saturation (Fassinger 2005); however, no participants opted to provide additional feedback.

Data Analysis

As part of CGT methodology, the first author kept a methodological journal and memos during the recruitment, interview, transcription, and analysis processes (Charmaz 2014). The *constant comparative method* associated with a CGT approach was used. CGT methodology was used because it (a) honors the voice and experience of the participants, (b) is intentional in its consideration of context, (c) aids in theory development, and (d) recognizes the role of the researcher in interpretation (Charmaz, 2014). To determine links between the data, coded data were interpreted in terms of words, context, frequency and extensiveness of comments, specificity of comments, intensity of comments, internal consistency, and "big ideas" noted.

First, line-by-line coding of printed transcripts was performed to develop both initial and focused codes. The first author reviewed all transcripts, and one other reviewer (JBC) coded at least one transcript for each participant sub-group at the initial and focused code level. Both authors collaborated to assemble and categorize initial codes into focused codes and thematic categories as well as to explore relationships between specific thematic categories (see Table 2). As an example, *descriptions of family members and friends with ASD* (initial codes) were used to develop a focused code titled *knowledge through personal connections*, which was later categorized under the thematic category for LEOs labeled *identifying prior knowledge and training related to ASD*. If there was a disagreement regarding coding between researchers, the meaning of the narrative, codes, and themes were discussed until consensus was reached. In the present study, *credibility and trustworthiness* were established in several ways, including the consideration of data saturation and theoretical sampling, identification of researcher bias, triangulation of data, incorporation of member checking, analysis of negative cases, and use of an additional researcher to code transcripts and analyze data.

Results

LEOs, adults with ASD, and caregivers shared diverse stories related to their interactions with and perceptions of one another. Table 2 summarizes the main thematic categories as well as focused codes related to each thematic category. Representative direct quotes from participants are included below and in Table 3.

Thematic Categories for LEOs

All LEOs described stories of their experiences with individuals with ASD, shared innovative approaches to support the ASD community, identified their past training experiences, and discussed their perspectives regarding how to best train LEOs to support people with ASD.

Identify Prior Knowledge and Training Related to ASD

LEOs obtained knowledge of ASD through (a) their experiences with mothers who were teachers and social workers (L1, L3), (b) friendships with individuals with ASD (L1, L6), (c) family members with ASD (L1, L5), and (d) first-hand professional experiences (e.g., teaching, social work).

Table 2 Thematic categories and focused codes for LEOs, caregivers, and adults with ASD

Participants	Thematic categories	Focused codes
Law enforcement officers (N=6)	A. Identifying prior knowledge and training related to ASD	A1. Knowledge through personal connections A2. Knowledge through textbook-type sources A3. Knowledge through media sources A4. Knowledge obtained through prior training
	B. Recalling "On the Job" experiences involving individuals with ASD	B1. Perception of individuals with ASD B2. Perceptions of caregivers B3. Perceptions of interactions between individuals with ASD and others B4. Limitations of system to notify responders about ASD diagnosis
	C. Describing ASD-specific training recommendations	C1. Provide knowledge of ASD C2. Make training mandatory and compensated C3. Emphasize interactive nature of training C4. Offer empathy training C5. Describe effective strategies to use during encounters C6. Importance of interactions with ASD community
	D. Suggesting need to identify ASD prior to encounter	D1. Importance of disclosing ASD diagnosis prior to encounter D2. Need for identification badges/stickers for people with ASD D3. Helpfulness of special incident report form for LEOs to use
Adults with ASD (N=6)	A. Describing personal ASD characteristics	A1. Restricted, repetitive behaviors and interests A2. Experiencing social-communication deficits A3. Existing in their own world and feeling withdrawn A4. Experiencing sensory sensitivities A5. Describing vulnerability of ASD community
	B. Recalling perceptions of actual and/or potential interactions with LEOs	B1. Reporting history of previous encounters with LEOs B2. Feeling anxious and/or overwhelmed during encounters B3. Experiencing difficulty communicating with LEOs B4. Having difficulty maintaining appropriate eye contact B5. Expressing viewpoints regarding disclosure of ASD diagnosis B6. Fearing misinterpretation of behaviors
	C. Identifying what they want from LEOs during interactions	C1. Recognize characteristics of ASD C2. Utilize effective support strategies C3. Remain patient C4. Display compassion and empathy C5. Focus on personalization
	D. Providing recommendations for ASD-specific training	D1. Make training mandatory D2. Establish effective training facilitators D3. Provide knowledge about ASD D4. Focus on prevention of misperceptions and/or misunderstandings D5. Teach strategies to support people with ASD D6. Provide interactive training experiences
	E. Highlighting importance of community interactions with LEOs	E1. Importance of interacting with LEOS during community events E2. Training needed for people with ASD regarding interactions with LEOs
Caregivers (N=5)	A. Describing children's characteristics and behaviors associated with ASD	A1. Social-communication deficits A2. Restricted, repetitive behaviors and interests A3. Odd/inappropriate Behaviors A4. Difficulty negotiating community and public outings

Table 2 (continued)

Participants	Thematic categories	Focused codes
	B. Expressing fears related to children with ASD	B1. Vulnerability associated with characteristics of ASD B2. Judgment from others due to child's ASD diagnosis B3. Misinterpretations and/or misperceptions of behavior B4. Negative outcomes of encounters with LEOs
	C. Identifying wishes/hopes for children with ASD	C1. Advocate for self C2. Develop skills to be independent from others C3. Know how to use ASD identification cards and disclose diagnosis C4. Receive training related to best approaches during interactions with LEOs
	D. Highlighting what they want from LEOs during interactions with children with ASD	D1. Display compassion and sense of humanity D2. Provide protection D3. Remain patient during interactions D4. Offer support for family D5. Refrain from using ASD diagnosis as an "excuse"
	E. Providing recommendations for LEO training related to ASD	E1. Mandatory nature of training E2. Separate training to address various LEO roles (e.g., patrol, detective) E3. Provide knowledge of ASD E4. Teach variety of response strategies to support people with ASD E5. Raise awareness of potential danger due to elopement E6. Need for interactive training experience
	F. Importance of community connection between LEOs and ASD community	F1. Effectiveness of 'meet and greet' events in schools and community F2. Hoping LEOs connect with children in their neighborhoods/sectors

In addition, some LEOs acquired ASD knowledge through textbook-type and media sources such as college coursework, newspaper articles, television shows, and movies (L2, L3, L6). Even though ASD is not a mental illness, all LEOs obtained brief training on ASD through the comprehensive Crisis Intervention Team (CIT) program that focuses broadly on people with mental illness and/or experiencing mental health crises. In addition, one LEO shared that an online training on elopement provided details about ASD (L1), and two LEOs received in-person ASD training (L1, L6). Several LEOs (L1, L5, L6) attended community 'meet and greet' events where they interacted with individuals with ASD and their caregivers as well as obtained helpful resources upon completion of an ASD awareness training.

Recalling "On the Job" Experiences Involving Individuals with ASD

LEOs recalled responding to the following types of encounters: (a) domestic disputes with family members (L1, L3, L6), (b) instances of child elopement (L2, L4), (c) an interview where a female victim with ASD reported an alleged rape charge against someone (L3), (d) inappropriate behavior of person with ASD (e.g., public indecency; L4), and (e) engagement in aggression and/or self-injurious behavior (L1, L5, L6). Many LEOs highlighted deficits in social-communication that they recognized during their interactions with people with ASD. LEOs noted the following characteristics associated with ASD: (a) lack of eye contact, (b) difficulty communicating, (c) sensory sensitivities, (d) repetitive motor behaviors, (e) aversion to physical touch, and (f) vulnerability of people with ASD. In addition, all LEOs described how individuals with ASD responded to LEOs, including themselves, during encounters. Two LEOs described separate situations where young men with ASD reacted with aggression when one LEO tried to communicate with them. Another LEO reflected on encounters where two individuals with ASD responded positively to his attempts to communicate such as when a teenager with ASD used an alternative communication system (i.e., passing written notes) to interact with the LEO.

Several LEOs described responses to calls they received related to individuals with ASD eloping from their homes. One notable interaction occurred when a LEO (L2) received

Table 3 Major themes across and between participants

Participant sub-group	Potential for misinterpretations and misperceptions of behavior of individuals with ASD	Helpfulness of identification systems/symbols and disclosure of ASD diagnosis prior to encounters	Need for interactive, mandatory training unique to LEOs' needs and roles	Importance of building community connections between LEOs and individuals with ASD
LEOs	(1) I mean I would think he looks like he is on drugs if he is doing that with his hands. (L1) (2) To tell you the truth, it would be tough for me to say, "I could tell you if that person had autism or not." I may not understand their behavior. (L5) (3) I think that's one of the biggest fears for most parents, too, is that what if my son gets approached by the police and doesn't know how to respond to it? What's gonna happen to my son? What will police think about him? (L6)	(1) In this form it was basically just all the questions. Like, you know, it was a picture of the kid or whoever ran off or wandered, all their information, where they went, what things they like that… what we're going to try to use it as, is something we could take, report wise, and then dispatch could pull it up. Like, "Oh, Timmy is, you know, this old. He looks like this. He likes the color red and he likes Mickey Mouse songs. (L1) (2) I would try to find a universal symbol. There we go, a universal symbol that would be…considered that would… help identify a person with autism, whether it…they're a child or an adult…that police and fire and EMS would immediately recognize. (L4) (3) If they didn't notify you and there's an adult that lives with them that has autism and he, kind of, yeah. It could be a bad situation. (L5)	(1) We all need the training, just to have a basic understanding of what it's about and what it is, even something separate for a patrol officer or detective like a training for each of them. (L2) (2) I think there should always be relevance to police work in the autism trainings. It certainly gets people's attention. (L3) (3) I would say probably for the most part…it's maybe a stereotype but I think most officers like hands on training…Scenarios are a big thing. So yeah, that's always important with a topic like autism. (L5)	(1) I would say that the more agencies, especially ours, over the years, has turned this towards this, you know, being directly involved and committed to your community and this isn't just police, but these are our community. We're a part of it. (L3) (2) I think any time you have interaction or develop interpersonal skills with someone that may be afraid of the police, it is always a key…and for things t change you have to develop relationships. (L4) (3) I think it's pretty good that you can learn if you don't know how to recognize the signs or you've never been actually put into a situation with somebody like that. It's a very fast learning curve that I feel like it's a crash course and you're gonna learn really fast if you're interacting with autistic people in the community. (L6)

Table 3 (continued)

Participant sub-group	Potential for misinterpretations and misperceptions of behavior of individuals with ASD	Helpfulness of identification systems/symbols and disclosure of ASD diagnosis prior to encounters	Need for interactive, mandatory training unique to LEOs' needs and roles	Importance of building community connections between LEOs and individuals with ASD
Adults with ASD	(1) They might think, she's on drugs, she's doing something bad you know, if they see me having an anxiety attack and looking nervous. (A1) (2) When I would try to be playful when I was in the residential setting…like that *moves head repeatedly in up and down motion*. And they thought I was trying to flinch at them and come at them. Officers would probably think like that, too…like they would think "he's trying to bully, he's trying to make threats. (A2) (3) It could look like I'm on drugs, but I'm not. I've never had a drug in my life. Sometimes police just don't know if they're dealing with someone who's on drugs or someone who just has autism or something. (A3)	(1) I'd tell them to back off, "You're freaking me out a little here." "I've got Asperger syndrome. I'm high functioning." I could tell them that." That way, they'd know what was going on with me without having to guess. (A3) (2) Yes, like the police need a list of my medications, information about me, and my family, who's my emergency contact in case it gets really bad and I need help when they come. (A5) (3) I'm not sure if this is a situation where disclosure would…or the matter of disclosure would sorta help. At least sort of help clear the air a little bit, and, you know, just mentioning that I have a high-functioning autism disorder and that I need a little bit more time, and a little more energy, and a little more effort, I should say, as opposed to energy. A little more effort to be able to, you know talk with the officers. I think the disclosure would help, at least a bit. (A6)	(1) I think all officers should have the training and it should involve videos and specific news stories. Let's say you have a PowerPoint, first few slides just tell people the basic signs of autism and the common problems between officers and suspects with or without autism…then kind of dive more into the specific cases and scenarios then show a few videos and then somehow wrap it all up in the end with what they should be doing in the future. (A1) (2) Discussion and activities are good ideas. A lecture will put them to sleep, active men and women that they probably are…There's always a good game, an exercise where they think of questions they could ask. Give them a sort of word problem or situational problem involving someone with autism. (A3) (3) Certainly, with the lack of training, I would say that at least, up to now, that they have with these kind of disorders, but also my hope that the much better training that they will be receiving would make them more receptive and understanding of our population… I think it should be more mandatory because, for the simple reason that the autism population is growing, and growing, and growing (A6)	(1) Not just in a classroom, like a lesson, they need to interact with people like me like where they live. (A2) (2) It would be nice if somebody can be a like an advocate. If I am really upset and can't form my words, and like be clear-minded, somebody could help me. Like be with me in the community and get to know me. (A5) (3) We're all familiar with the 'shop with a cop' event and, you know, especially all this stuff around the holidays that, luckily, we're getting to see more of that in the local news. It's good to see them out there with all different people and these events kinda help to build community trust. (A6)

Table 3 (continued)

Participant sub-group	Potential for misinterpretations and misperceptions of behavior of individuals with ASD	Helpfulness of identification systems/symbols and disclosure of ASD diagnosis prior to encounters	Need for interactive, mandatory training unique to LEOs' needs and roles	Importance of building community connections between LEOs and individuals with ASD
Caregivers	(1) My son may do the flapping around. And of course, someone can see that and think, well, they're on drugs, they're, you know, drunk, and then it can get ugly. (C1) (2) When my son is uncomfortable or he gets very stimulated, he does this like really low in the throat, deep based type, grunting and yelling and you have no idea like is he overstimulated? Is he just trying to say something to you? Is he getting overwhelmed? As a parent, If I can't tell what it is, then I do not think an officer's going to know what it is? No, they'll just think my son is being violent and aggressive…I mean at that point, depending on how old he is, he'd probably get shot. (C2) 3) So I can see where if you came upon her and she was behaving like that in public, kind of talking to herself, you might think she was crazy. They would think there's probably something wrong with her…Then, if she wasn't responding to them, I assume they would think she's ignoring them and being disrespectful. (C4)	(1) Basically it was just a regular sheet of paper, in the corner, we were gonna put the individual's picture, and every…if they were in school, every… when they got their pictures taken, we were gonna make a profile of their needs and update it…and each year when we update it, we would ask the parents, or we would call them, or I would call them if that was the case, and say, hey, is there anything new? This is what we have. Has anything changed? And each officer there would be a database in the computer. (C2) (2) So, what I tell police officers is definitely where you need to look for, medical alerts, because a lot of them think, well, just wrist and neck, you know? But no, that's not the case, it's wrist, neck, ankles, shoes, and belt loops. You need to look for some identification that they have autism. (C3) (3) One of the things that…one of them is just to let people know that your kid has autism. So as opposed to just hiding in your home, you know, at least the neighbors know that you have a child with autism. Some people even proactively say "Let the police department know", so they can keep it on file and help your child in the future. (C5)	(1) I think for the best hands-on experience, I would bring in a higher-functioning, like, consenting adult, and then I would bring someone like my son that's very dependent, and so they would see just how broad the spectrum could be. And then give them a scenario, and you're like, "Okay, you have these two adults, same scenario, how do you handle it? (C2) (2) I feel like it's really, really important for police officers, firefighter, EMS. Anytime…any person who's gonna be a first responder to know what to look for and to…not just to know what to look for, but to have some exposure to autism and what it would look like for them if they're, say, on the job helping someone with autism. (C3) (3) I think some minimum autism training should be mandatory…I think at least one day of an interactive class would be better because the…I mean, even parents of people of autism kids, for lack of a better term, say "There is no typical autistic." So that way they can see the whole spectrum. (C5)	(1) You're not gonna know everyone with autism, but if you all get out there, you're gonna know them and see them. (C1) (2) I think officers should definitely know kind of what autism looks like. If they have an opportunity to do a meet and greet, absolutely you take part in that. I noticed not all of the officers in the area have taken part. I think the meet and greets are definitely appropriate to give the exposure to officers. (C3) (3) You know, what would be really useful is if autistic kids, in particular the aspie, were given training on how to deal with officers. So the other way around so that they knew, like if I can't be with my daughter, at least she can remember Mom said be calm. If you're talking to a police officer, it's okay to ask for ID. You now, this is how you should behave, keep your hands where they can see them. It's just a question of safety. I think it would actually be really helpful. I may even mention that to the support group in town that it'll be useful to have officers come into train the group. (C4)

a dispatch call around midnight from a family who was concerned that their adolescent with ASD had eloped from their home. The LEO described asking the caregivers about their son's favorite places and interests before the father identified his son's fascination with hotel swimming pools, which ultimately helped the LEOs find him at a local hotel pool. Many LEOs shared stories that reflected on the fear and/or stress caregivers experienced when their children were either missing after eloping or engaging in aggression and/or self-injurious behavior (L1, L2, L4, L5). In some situations (e.g., elopement calls), LEOs found caregivers to be helpful. For example, one LEO stated that parents' input was helpful in identifying an effective strategy to use after a young child with ASD eloped: "… the parents said he loved Mötley Crüe or Guns N' Roses. So we all have PAs on our cruisers so they just fired up Mötley Crüe on their cruiser and the kid walks right up to the cruiser" (L1). In addition, several LEOs (L1, L2, L4) recalled the helpfulness of neighbors and other caretakers during encounters.

Describing ASD-Specific Training Recommendations

All LEOs highlighted the importance of ASD-specific training. Four of the six LEOs (L1, 2, 4, 5) suggested ASD training should be mandatory, and two LEOs specifically mentioned that the training should be compensated (L1, 2). All six LEOs described the need for LEOs to possess knowledge of the core characteristics of ASD, especially related to social-communication deficits, sensory sensitivities, and restricted, repetitive behaviors and interests. LEOs highlighted the importance of learning about ASD characteristics that are easily recalled and accessible during encounters. Half of the LEOs (L1, 2, 5) recognized the need for information related to distinguishing ASD from other disabilities (e.g., intellectual disability) and mental health disorders. Further, many LEOs (L1, 3, 5, 6) suggested that the training should attempt to address potential misperceptions and misinterpretations of the behavior of individuals with ASD. In particular, LEOs referenced the fact that several characteristics associated with ASD (e.g., odd gait, repetitive behaviors) may resemble excessive drug or alcohol abuse (see Table 3).

All LEOs emphasized the need to learn effective strategies to support interactions between LEOs and persons with ASD. Specifically, LEOs highlighted the need to learn a variety of strategies such as: (a) increase use of effective communication strategies (all LEOs), (b) decrease use of patrol car lights and sirens (L2, 3, 4, 5), (c) de-escalation and calming strategies (L1, 2, 4, 5, 6), (d) reliance on caregiver, neighbors, and/or support staff for support (L1, 2, 3, 5, 6), (e) empathic response strategies such as active listening and perspective-taking (L1, 2, 3, 4, 5), and (f) incorporations of the interests of individuals with ASD (L1, 3, 6). LEOs

identified the following people as potential trainers: (a) individuals with personal connections to ASD such as caregivers and local ASD support group representatives (L2, 3, 4); (b) professionals with specialization in ASD (L1, 4, 5); and (c) LEOs with ASD and policing experience (L1, 6). Half of the LEOs (L1, 5, 6) noted the benefits of a collaborative training with facilitators consisting of LEOs, members of the ASD community, and professionals with an interest in ASD.

All LEOs emphasized the importance of using experiential learning strategies, and they specifically recommended the following interactive approaches: (a) discussion surrounding real case examples describing encounters between people with ASD and LEOs, (b) role-play scenarios with actors portraying individuals with ASD, (c) feedback regarding their interactions during role-play scenarios, (d) small-group discussions, (e) exposure to members of the ASD community and caregivers, and (f) review of videos portraying real and/or hypothetical interactions between LEOs and persons with ASD. Half of the LEOs (L4, 5, 6) mentioned the importance of community interactions with the ASD community as part of training programs.

Suggesting Need to Identify ASD Prior to Encounter

Several LEOs referred to the helpfulness of knowing someone has ASD before arriving to the scene. LEOs noted that they could receive knowledge of ASD diagnoses through several means, including (a) disclosure by caregiver, person with ASD, staff support personnel, or neighbor, (b) presence of identification stickers/signs on cars and houses of people with ASD, or (c) reference to special incident reports that allow LEOs to track profiles of people with disabilities. Several LEOs (L1, 4, 5) referenced the helpfulness of unique approaches such as programs that provide identification cards/badges to individuals with ASD, a common ASD symbol that is recognizable to first responders, and a special needs incident report form (see Table 3). While acknowledging that knowledge of an ASD diagnosis may come from varied sources, LEOs' stories highlighted the importance of possessing this information prior to arriving on scene to ensure LEOs are able to adequately respond to the needs of people with ASD.

Thematic Categories for Adults with ASD

Although all adults with ASD showed signs of the core deficits of ASD, they displayed and identified different abilities, strengths, and challenges. A few individuals provided details regarding previous encounters with law enforcement; however, all participants described their perceptions regarding potential interactions with LEOs, including the nature of encounters and how LEOs can best support people with ASD.

Describing Personal ASD Characteristics

All adults identified and referenced behaviors that may stand out during interactions to other individuals, such as LEOs. While all adults with ASD used words to communicate, their communication skills and preferences varied greatly (e.g., one used self-proclaimed "broken English" and others spoke in full, complex sentences). A few individuals (A2, 3, 5) noted that they have difficulties modulating the loudness and tone of their voices. All participants described difficulties with social interactions such as appearing "more socially awkward or socially uncomfortable" (A6). In addition to social-communication deficits, all adults with ASD identified their restricted, repetitive behaviors and interests. For example, most adults with ASD (A2, 3, 4, 5, 6) suggested that LEOs and others may identify them due to their gait and motor movements (e.g., jumping, head swaying, toe walking). Several participants (A1, 2, 5, 6) also described their sensory sensitivities to lights, sounds, and physical touch. While describing their characteristics related to ASD, two adults highlighted the vulnerable nature of individuals with ASD. For example, one person stated, "I want to go in the community, but something tells me it's not too safe to go out there right now, because I might get lost. Someone might notice and take advantage of me"(A6).

Recalling Perceptions of Actual and/or Potential Interactions with LEOs

During interviews, half of the adults (A1, 3, 6) reported no prior interactions with LEOs while the other three adults (A2, 4, 5) reported previous encounters with LEOs. Two adults (A2, 5) interacted with law enforcement when LEOs were called due to aggression toward others (e.g., siblings, peers in a residential facility). One individual described an incident where a community member called LEOs after seeing him engage in inappropriate behavior with a female in a public park (A5). Lastly, another adult with ASD (A4) interacted with LEOs twice during separate incidents when his bicycle was stolen on two different college campuses. During both incidents, the young man with ASD relied on his parents to provide guidance and follow-up with the department regarding the stolen bicycle.

When describing hypothetical and real encounters, most adults (A1, 2, 3, 5, 6) either felt or believed that they would most likely feel anxious and/or overwhelmed while interacting with LEOs. Adults with ASD also noted the likelihood that they would experience difficulty (a) initiating conversations with LEOs (A1, 2, 3), (b) engaging in reciprocal conversations (A2, 3, 5, 6), (c) maintaining appropriate eye contact (A1, 3, 6), (d) controlling their repetitive behaviors such as motor movements and vocalizations (A2,3, 5, 6), and (e) regulating their facial expressions (C1, 3, 6). As a group, adults with ASD expressed a variety of perspectives regarding the likelihood that they would disclose their ASD diagnoses to LEOs. While four adults (A1, 2, 3, 6) believed it would be helpful for LEOs to have knowledge of their ASD diagnoses, one adult (A5) stated he would only tell LEOs about his ASD diagnosis if he needed medical support. In addition, the majority of adults with ASD (A2, 3, 5, 6) described their fears that LEOs may misinterpret their behaviors. For example, individuals feared that their lack of eye contact and repetitive motor behaviors would lead LEOs and community members to believe they are suspicious. Half of the adults with ASD (A1, 5, 6) feared that LEOs may believe they are under the influence of alcohol or illegal substances (see Table 3).

Identifying What They Want from LEOs During Interactions

Most adults (A1, 4, 5, 6) suggested it would be helpful for LEOs to be able to quickly recognize characteristics of ASD. To prepare LEOs for interactions, one adult (A2) noted that it would be helpful for departments to have files with important information for people with ASD in their communities (see Table 3). In addition, several adults (A1, 2, 5, 6) referenced a variety of specific support strategies that they believed would lead to the most successful interactions, including (a) use de-escalation strategies, (b) decrease use of weapons and physical force, (c) use effective communication skills (e.g., calm tone, simple directions), (d) maintain personal space and limit number of LEOs who engage with person with ASD, (e) remain patient, and (f) display compassion and empathy.

Providing Recommendations for ASD-Specific Training

Most adults (A1, 2, 4, 5, 6) stated that training should be mandatory for all LEOs. Participants suggested the following individuals could serve as effective training facilitators: (a) LEOs with experiences with ASD community, (b) professionals with specialization in ASD, (c) individuals with ASD, and (d) family members of individuals with ASD. Several adults (A1, 5, 6) suggested that collaboration between groups may lead to the most effective training. All adults with ASD noted that training programs should provide knowledge of ASD, including identifying (a) differences in social-communication abilities (A1, 2, 3, 5, 6), (b) restricted interests (A2, 3, 4, 6), (c) repetitive behaviors (A2, 3, 6), (d) difficulties understanding humor and sarcasm (A1, 3, 5), and (e) sensory sensitivities (A2, 3). Most adults with ASD (A1, 2, 3, 4, 6) also suggested that LEOs should learn about the heterogenous nature of ASD. Most adults also recommended that the training content review differences between ASD and other disorders such as behavioral/mental health concerns and other

disabilities (A1, 2, 3, 5). While presenting information, all adults recommended that facilitators share information that prevents misperceptions and misinterpretations of the behaviors associated with ASD (see Table 3).

Adults also emphasized the importance of teaching LEOs strategies to support people with ASD during interactions. The most common strategies that adults recommended include (a) calming/de-escalation strategies such as providing access to "a calm space" and "stress balls/ fidget spinners" (A1, 2, 3, 4, 6) and (b) effective communication skills such as using a gentle tone of voice and asking direct questions (A2, 3, 4, 5, 6). Half of the participants (A2, 4, 5) noted that LEOs should learn effective strategies to use while interviewing individuals with ASD such as providing breaks, ensuring the individual with ASD remains "comfortable," allowing family members to be present during interviews, and asking questions at a "slow pace." Further, several adults with ASD (A2, 3, 5) believed that LEOs should contact and rely on caregivers and/or support staff during all calls involving individuals with ASD.

A few participants (A2, 5) identified the helpfulness of training LEOs to recognize when they need to involve behavioral health agencies and hospitals to support individuals with ASD (see Table 3). Participants provided the following recommendations regarding how to make the training interactive: (a) interactions and discussions with people with ASD during training (A2, 3, 4, 5, 6), (b) case examples that discuss "famous people with autism" or "stories from the news" (A1, 3, 4, 5), (c) small- and whole-group discussions (A3, 5, 6), (d) inclusion of videos (A2, 4, 5), and (e) use of roleplay scenarios (A1, 3, 5).

Highlighting Importance of Community Interactions with LEOs

Beyond learning about ASD through a training, several adults with ASD (A2, 5, 6) emphasized the importance of LEOs remaining engaged in their communities and interacting with the ASD community. One individual (A5) benefited from meeting LEOs at a local 'meet and greet' event in the community. Further, the young man also expressed his wish to receive unique training, involving roleplays and repeated practice with LEOs, regarding how to interact successfully with LEOs in the future. Another adult with ASD (A6) suggested that active engagement in the community helps build others' trust in law enforcement departments as a whole. When adults with ASD referenced LEOs' engagement in their local communities, the stories and experiences were shared positively and highlighted benefits for LEOs and the ASD community.

Thematic Categories for Caregivers

Caregivers discussed their children's characteristics associated with ASD as well as their fears regarding their children's' interactions in the community and with LEOs. Caregivers shared a variety of information that can inform future ASD-specific training.

Describing Children's Characteristics and Behaviors Associated with ASD

All caregivers described their children in detail, including their characteristics and behaviors associated with ASD. For instance, all participants provided details about their children's social-communication deficits. Two caregivers (C2, 3) noted that their sons would have trouble communicating with LEOs given that they are nonverbal. Caregivers also noted the following characteristics related to their children's communication skills: (a) repetitive speech, (b) off-topic, tangential conversations, (c) difficulty regulating voice volume, (d) lack of awareness of nonverbal behavior such as their own facial expressions, (e) misuse of pronouns, and (f) difficulty with reciprocal conversations. In addition, all caregivers identified their child's restricted, repetitive behaviors and interests, including those behaviors that LEOs and others may perceive as odd or inappropriate. Caregivers (C1, 2, 3, 5) also expressed their fears that their children's repetitive behaviors may seem odd or inappropriate to LEOs and others. Three caregivers (C1, 3, 5) were concerned that their children may not realize that it is inappropriate to grab or reach for LEOs' badges or guns. Several caregivers (C 2, 3, 4, 5) described the difficulty their children experience navigating public spaces such as malls, grocery stores, and parks. Two of those caregivers (C 2, 3) noted that their families tend to avoid community environments due to the stress these situations have caused in the past.

Expressing Fears Related to Children with ASD

During the interviews, all five caregivers highlighted a variety of fears they experience surrounding their children with ASD. Two mothers of sons who are nonverbal (C2, 3) emphasized the vulnerable nature of their children given their limited communication skills (e.g., they may not respond when others ask them to in public). One caregiver expressed concerns related to the fact that her son is "easily manipulated" or "too trusting" (C1) while three others identified similar fears related to their children's vulnerability. While reflecting on how LEOs may perceive their children's behaviors, all caregivers identified the potential for misinterpretation and/or misperceptions of behavior. Caregivers

shared concerns that LEOs may misinterpret certain behaviors (e.g., odd gait) as similar to the behavioral effects of someone who is under the influence of drugs and/or alcohol.

Perhaps most concerning, caregivers (C1, 2, 4) described their fears if their children were to interact with LEOs who did not know how to support individuals with ASD. For instance, one participant (C4) feared that an interaction "could go south pretty quick" if LEOs were aggressive and confrontational in nature with her daughter. Further, one mother summarized perhaps some of caregivers' greatest concerns regarding their children's interactions with law enforcement, "I fear them not taking 30 s to evaluate the situation, someone shooting him, or someone trying to restrain him without like giving him cues that it's going to happen" (C2).

Identifying Wishes and Hopes for Children with ASD

All participants referenced desires for their children with ASD to advocate for themselves and increase their independence. Caregivers identified goals that their children would be able to use ASD identification cards, gain independence, and advocate for themselves if given appropriate training and practice. Four caregivers (C2, 3, 4, 5) specifically emphasized the helpfulness of a training for their children with ASD to obtain skills that support successful interactions with LEOs. One caregiver (C2) identified a time she taught her son to use a picture communication system with LEOs during a community 'meet and greet' event, another caregiver (C5) described taking his son to the local police department to introduce him to LEOs.

Highlighting What They Want from LEOs During Interactions with Children with ASD

One major theme related to caregivers' desire for LEOs to display compassion and a sense of humanity when interacting with their children with ASD. Four caregivers (C1, 2, 3, 5) identified their hopes that LEOs will understand the perspectives of others as well as take a general interest in their children with ASD and their families. When describing how LEOs can support individuals with ASD during interactions, several caregivers (C1, 2, 3, 4) emphasized their desire that LEOs keep their children safe as evidenced by one caregiver's statement: "I want security and protection because my son is too trusting with people" (C2). Further, three caregivers (C1, 2, 5) specifically mentioned their hopes that LEOs remain patient and offer support to families during interactions. One caregiver (C1) described a real-life encounter when she was stopped for a speeding ticket, and the LEO allowed her time to help her son with ASD calm down after noticing he was having a meltdown in the backseat. Two caregivers (C1, 2) suggested LEOs would

benefit from understanding caregivers' perspectives and experiences.

Providing Recommendations for LEO Training Related to ASD

All five caregivers proposed that training should be mandatory. Further, one father preferred that all LEOs possess at least some knowledge of ASD as opposed to only "a few autism specialists because you never know if your autism specialist is working on a different shift or at the other end of town" (C5). Rather than providing only one generic ASD training for law enforcement, two caregivers (C2, 5) suggested it may be helpful to design separate trainings to address the various roles (e.g., patrol, detective) that LEOs serve. Caregivers shared characteristics of ASD that LEOs may be able to identify during their interactions such as hand flapping, rocking, walking on tip-toes, odd gait, difficulty with expressive language, social skill deficits, lack of eye contact, and sensory sensitivities. Four caregivers suggested that LEOs learn about the heterogenous nature of ASD. Several caregivers (C2, 3, 4) emphasized the need to highlight the unique aspects and needs of someone with ASD who is nonverbal. In addition to learning about ASD, two mothers (C1, 2) suggested that LEOs should be able to differentiate between ASD and other behavioral health concerns and disabilities such as Down Syndrome and Schizophrenia.

In addition, all caregivers described similar response strategies to teach LEOs that would help support individuals with ASD. Specifically, caregivers provided the following suggestions: (a) de-escalation/relaxation techniques (all), (b) incorporate restricted interests/objects of individuals (all), (c) rely on caregivers for support and input (all), (d) use simple language with calm tone (C1, 2, 4, 5), (e) consider sensory sensitivities by decreasing use of lights/loud noises/physical touch (C1, 2, 3, 4), (f) provide processing time, (C1, 3, 4), (g) look for identification tags/badges/stickers/cards (C1, 2, 3), (h) use alternative communication strategies such as visual board/sign language (C2, 3), (i) offer personal space (C3, 5), and (j) prepare for transitions (C2). When reflecting on the training format, all caregivers recommended the need for interactive training experiences for LEOs. Caregivers proposed the use of videos, case studies, small- and large-group discussion, interactions with the ASD community, and role-play scenarios with feedback to ensure training programs are interactive.

Importance of Community Connection Between LEOs and ASD Community

As a whole, caregivers described their desire for LEOs to remain actively engaged in their communities (see Table 3 quotes). One event that all caregivers believed would benefit

both the ASD and LEO communities are 'meet and greet' events in local schools and local communities. Most caregivers (C1, 2, 3, 5) described hopes that LEOs would connect with children with ASD in their neighborhoods, sectors, and greater communities. Three caregivers (C1, 2, 3) noted that LEOs should become involved with local community programs and agencies that support people with disabilities, including those with ASD.

Discussion

Seventeen participants described their interactions with and perceptions of one another. In addition to within-group themes provided in Table 2, four themes emerged across participant groups, including the (a) potential for misinterpretation of the behavior of individuals with ASD; (b) helpfulness of a general identification system/symbol and disclosure of ASD diagnosis prior to encounters; (c) need for interactive, mandatory training unique to LEOs' needs and roles; and, (d) importance of building community connections between LEOs and people with ASD (see Table 3).

Potential Misinterpretations of Behavior of Individuals with ASD

Participants' narratives suggest that they recognize the potential for LEOs to misinterpret or misperceive the behaviors of individuals with ASD, which may lead LEOs to conclusions that individuals are under the influence of alcohol/drugs, being violent/aggressive, or being disrespectful. Participants' concerns fall in line with previous research that suggests that LEOs may misinterpret a variety of behaviors and characteristics associated with ASD (Mogavero 2018). To prevent further negative outcomes and increase LEOs' understanding of ASD, law enforcement departments should offer training that directly combats potential misinterpretations while also reviewing more effective response strategies that LEOs can use to support individuals with ASD during interactions.

Helpfulness of Informing Systems/Identification Symbols and Disclosure of ASD Diagnosis

Many participants across all three sub-groups described the helpfulness of a system and/or symbol to alert LEOs to the fact that someone they are encountering has an ASD diagnosis. Symbols and informing systems can take a variety of forms, such as identification cards/tags, incident report forms that LEOs complete, decal stickers on cars/homes, and applications on electronic devices that alert first responders to the fact that someone has ASD. Despite the potential helpfulness of a symbol or system, it

is important to acknowledge the caution that should exist around the use of these systems. Specifically, enrollment in a system and/or use of identification symbols to represent ASD should be wholly voluntary, and individuals with ASD and their families should never be required to use these approaches. Instead, the decision to use such systems (e.g., identification cards, SMART 9-1-1) should acknowledge and honor the self-determination of individuals' with ASD. Examples of existing systems and symbols are discussed below.

One system, named Vulnerable Individuals Technology Assisted Location Services (VITALS), serves this purpose through a mobile application (VITALS n.d.). The VITALS program enables individuals with ASD to voluntarily disclose their ASD diagnosis and other information (e.g., caregiver contact, de-escalation techniques) to first responders who come within a 30- to 50-foot radius of a small beacon that can be detected by the app on a first responder's mobile phone. Further research into the effectiveness of programs, such as VITALS, are essential to inform future development and implementation of these similar identification programs and systems.

Many participants suggested that it is critical to LEOs to know that the person they are interacting with has ASD prior to arriving on the scene. A few ways that individuals with ASD may communicate their ASD diagnoses to LEOs include the use of (a) visible identification symbols (e.g., ID bracelets, shoe tags) and/or (b) disclosure through a variety of means such as the caregiver or individual with ASD communicating this information directly to LEOs or sharing "autism disclosure" cards with LEOs. On such program that allows for the direct sharing of critical information to 9-1-1 dispatchers is the Smart911 program, which also has a "Vulnerable Needs Registry" for individuals who wish to share their personal information and any special needs with first responders. Through this system, information is shared directly with dispatchers and first responders whenever a call is made to 9-1-1 from the phone numbers listed in the users' Smart911 Safety Profile. Although some individuals with ASD in the study stated that they would feel comfortable disclosing their diagnosis verbally to LEOs, this may not be the case for all individuals with ASD, especially those who are nonverbal.

Five years ago, Virginia adopted JP's Law in 2014, which allowed individuals to request that a special code be listed on driver's licenses and identification cards that would alert LEOs to the fact that they are interacting with someone who has ASD (J.P.'s Law. 2014; Virginia Code § 46.2-342). In Kentucky, citizens can elect to use the Yellow Dot Program, which allows them to share health and personal information with first responders if they were involved in a car accident (The Yellow Dot Program n.d.).

Need for Interactive, Mandatory Training Unique to LEOs' Needs and Roles

Participants across all three subgroups expressed their desire for LEOs to receive training regarding how to identify and appropriately respond to individuals with ASD; further, many participants believed this training should be mandatory for all LEOs and tailored to meet the needs of LEOs serving a variety of roles (e.g., detective, patrol officer, chief of police). Further exacerbating the need for LEOs to receive ASD-specific training, research notes that LEOs and criminal justice students are often not knowledgeable about ASD (Chown 2009; Crane et al. 2016; Modell and Mak 2008; Mogavero 2018). In the current study, participants highlighted the need for LEOs to obtain more information about ASD, such as review of common ASD characteristics, real case studies, direct interactions with ASD community, and review of potential misinterpretations that may arise. In addition to describing content that they hoped would be included in training programs, participants consistently referenced diverse, experiential strategies that facilitators could use to ensure the training programs were interactive in nature. It is unrealistic for LEOs to learn everything there is to know about ASD and other disabilities; nonetheless, having awareness of ASD and other disorders, particularly as they relate to police work, as well as general suggestions regarding how to support individuals would be helpful.

Despite the fact that some states and agencies are implementing ASD-specific training [e.g., Autism Risk & Safety Management, Experience Autism!, the Police Autism Community Training (PACT)], only two peer-reviewed studies have empirically investigated the effects of law enforcement training related to ASD (Murphy et al. 2017; Teagardin et al. 2012). A recently published dissertation (Medina Del Rio 2018) found that a privately-owned ASD law enforcement training program was effective in increasing LEOs' knowledge of core ASD symptoms and improving perceived confidence in interacting with individuals with ASD. The scarce amount of research, along with concerns raised by participants in the current study, highlights the need for more empirical evidence to establish effective ASD-specific training protocols and approaches for law enforcement departments. Ideally, training programs should include an overview of methods for identification of ASD and techniques LEOs can use to effectively and empathetically respond to individuals with ASD with the goal of fostering trust and increasing positive interactions between LEOs and the ASD communities.

Importance of Building Community Connections Between LEOs and Individuals with ASD

Participants in the current study described the need for mutually-beneficial partnerships and connections between LEOs and the ASD community. Although participants recognized that it is not feasible for LEOs to know every individual in their community, they identified how community interactions can help LEOs (a) increase their knowledge and empathy toward individuals with ASD and their families, (b) change negative community perceptions of law enforcement, and (c) form relationships with members of the ASD community. In fact, one study found that criminal justice students who had personal connections to someone with ASD consistently scored higher on an ASD knowledge measure, which suggests that interactions with individuals with ASD are essential to fully understanding the complexities of the disorder (Mogavero 2018). One well-known model, referred to as the Crisis Intervention Training (CIT) program, emphasizes the importance of offering structured opportunities for LEOs undergoing CIT to interact with families and individuals with mental illness.

Several participants also noted that it may be beneficial for individuals with ASD to practice interactions with LEOs during community events and/or joint training programs, which is the approach adopted by a few programs currently being implemented. Through 'Spectrum Shield,' LEOs in Los Angeles, California participate in a weekend-long program alongside young adults with ASD who also engage in training on how to safely interact with law enforcement (Sentinel News Service 2017). This intensive program offers time for LEOs to form connections with members of their ASD community as well as receive training that incorporates guided instruction, video modeling, and role-playing exercise to teach LEOs to safely identify and support individuals with ASD. Other groups, such as the PACT program, take a more informal approach to building community connections (Police Autism Community Training 2018) by inviting LEOs to 'meet and greet' events to interact with members of their local ASD community. Although community connections may take a variety of forms, it is imperative for LEOs and ASD communities to become comfortable with one another as well as to understand others' varying perspectives.

Strengths and Limitations

Although the investigation is preliminary in nature, the study addresses a gap in the current literature. Further strengths of the study include the use of broad recruitment criteria, inclusion of multiple participant sub-groups, and utilization of semi-structured interviews with open-ended questions to capture a more complete picture of the nature of interactions between LEOs and individuals with ASD as well as LEOs' training needs. In addition, the perspectives of six individuals with ASD were included in this analysis, which insured that the voices of the group under discussion were heard. Finally, the data were analyzed by two researchers, which increased the likelihood that a variety

of themes, subthemes, and categories were generated and decreased bias in the study.

Despite several strengths, findings and interpretations should be understood within the scope of the study's limitations. First, results from qualitative research are not generalizable. Second, the study relied on self-report, qualitative data only to understand participants' perceptions, which does not allow for a more direct measurement of experiences and perspectives. In addition, the small sample size of self-selecting participants indicates that potential selection bias may have affected the study's results. In particular, participants with a unique interest and passion for this subject may have been more likely to elect to discuss their experiences. Another potential limitation relates to the use of the SRS-2 and SCQ to confirm ASD diagnoses. Given that these measures should not be used alone to diagnosis ASD, there is potential that some of the participants with ASD may have been misdiagnosed. Lastly, participants were comprised of a small convenience sample of mostly White participants from a medium-sized Southeastern city.

Future Directions

Given the exploratory nature of the current study, several avenues for future research have been identified. More research is needed to better understand the nature of interactions between LEOs and the ASD community as well as LEOs' training needs. For example, it would be useful to incorporate quantitative measures designed to (a) identify LEOs' prior ASD and disability-related training experiences, (b) investigate the nature of encounters between LEOs and individuals with ASD (e.g., antecedents to interactions, strategies used by LEOs), and (c) examine the perspectives and attitudes LEOs and individuals with ASD report about one another. Future research should also investigate the development of a data collection system that allows departments to collect information regarding the nature, quantity, and outcomes of interactions with the ASD community. Specifically, departments could track (a) what resources are currently being used, (b) what future resources are needed, (c) how the department is meeting the needs of their local ASD community, and (d) what changes in policies or training should be made to support future positive interactions. Finally, continued research should investigate how ASD-specific training can (a) increase LEOs' knowledge of ASD, (b) improve LEOs' attitudes toward the ASD community, and (c) directly change LEOs' behaviors as measured by behavioral outcomes. Future research should also examine which training programs' components, characteristics, and modalities are most effective in randomized, controlled studies.

Compliance with Ethical Standards

Conflict of interest The authors declare that they have no conflict of interest.

Ethical Approval All procedures performed were in accordance with the ethical standards of the institutional review board of the institution and with the 1964 Helsinki declaration and its later amendments.

Informed Consent Informed consent was obtained for all individual participants included in the study.

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