Some Notes on the Development of an Autism-Accessible SKYWARN® Storm Spotter Program

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Some 3.5 million Americans live with an autism spectrum condition (ASC; Baxter et al. 2014). Autism is a set of neurological conditions characterized by difficulties in social communication, unusually narrow interests, repetitive behavior, and sensory sensitivities. One particular result of this pattern of characteristics is that autistic people may strongly prefer routine so, when an unexpected change occurs, such as during dangerous weather, it may be very challenging for them to cope and adapt.

To date, meteorologists have focused little attention on reaching autistic populations through weather education efforts and in public hazard messaging. One resource provided by the National Weather Service (NWS) Weather-Ready Nation (WRN) initiative targets intellectually-disabled (ID) individuals in a general sense (<https://www.weather.gov/wrn/intellectualdisabilities>). However, this resource was not, as far as we have been able to determine, developed with the same grassroots-level, local engagement as other resources, such as those for the Deaf and hard-of-hearing (<https://www.weather.gov/wrn/dhh-safety>). This includes NWS Forecast Offices (NWSFOs) as well as involvement by differently-abled individuals, and their caretakers, guardians, and other allies who could speak to the needs of these populations. In contrast, the resources and initiatives developed for the Deaf and hard-of-hearing, and for Spanish-speaking populations, have been created and spearheaded largely by local forecasters and community partners who are Deaf, hard-of-hearing, or Spanish-speaking. The ID-resource, further, does not provide for the specific needs of any particular group; rather, it attempts a blanket, one-size-fits all approach. While well-meaning, this is not always helpful.

To locally supplement this resource, and to begin to provide for the weather communication and education needs of autistic individuals, we—an NWS forecaster and meteorologically-knowledgeable, autistic psychology graduate student—partnered for a number of research studies on weather-autism connectivities (Bolton et al. 2018). This initial theoretical work provides evidence suggesting people on the autism spectrum tend to express higher levels of weather salience than non-autistic individuals. Given these results, this and further research pending publication has informed the creation of autism-accessible SKYWARN® storm spotter and weather education programs. The ASC-targeted SKYWARN® has also been co-developed in partnership with Maine-based autism organizations.

Historically, SKYWARN® has been facilitated to individuals without disabilities. However, this changed in 2012, when the NWSFOs in Nashville and Huntsville began workshops specifically for the Deaf and hard of hearing. Our autism-oriented pilot program at the NWSFO in Gray, ME, is the first of its kind.

The ASC-targeted SKYWARN® is different from a traditional spotter training program. Several modifications have been made to the typical program's content and delivery. These include:

1. Adapting content to include more visuals
2. Removing unnecessary technical “jargon,” with a focus on concrete concepts.
3. Careful consideration of audio-visual content, to lessen possible sensory stress impacts. This includes the removal of excessively-loud audio and videos with extreme content.
4. Limiting class sizes to allow for more one-on-one attention and to allow attendees.
5. Considering the social need of autistic participants.

Our goal is for the program to produce a more weather-savvy, safer adult autistic population, who know how to respond to varying weather situations. The response has thus far been very positive; we aim to expand NWSFO Gray's program in 2020. We hope other offices will look to our program as a template, so that more autistic individuals will be able to attend SKYWARN® spotter training across the country. Those interested in learning more about and adopting and adapting our program should contact Stacie for further information. Those interested in learning more about autism may do so by contacting Matt at Matthew.Bolton@email.saintleo.edu.

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