

## *“Does Compensation for Social Challenges in Autism Exact a Toll on Mental Health?”*

### *Background Information*

Autism Spectrum Disorder (ASD) is a neurodevelopmental disorder with a prevalence of 1 in 54 children in the United States, four times more common in boys than in girls (Maenner et al., 2020). This relatively common diagnosis is associated with social, behavioral and communication challenges. Social interactions are often a challenge for individuals with ASD, making interpersonal relationships and communication effortful and confusing. There is emerging evidence that many people with ASD utilize compensatory strategies in order to mitigate their social-communication difficulties and succeed in various social settings.

It is important to keep in mind that the definition of a “good outcome” for an individual with ASD is largely based on neurotypical standards as opposed to what someone with ASD would consider to be a good outcome (Livingston & Happe, 2017), thus requiring people with ASD to adapt to neurotypical standards. The compensatory strategies employed by people with ASD lessen behavioral symptoms and therefore lead others to believe they have a less severe form of ASD, despite having continued social cognitive challenges (Livingston et al., 2019). Examples of social-communication compensatory strategies include copying the body language or facial expressions of someone when interacting with them (Hull et al., 2020).

Qualitative studies of the lived experience of ASD suggest that the taxing efforts required to engage in compensatory actions/behaviors in ASD can exact a toll on mental health and cognitive resources. Thus, there may be a significant amount of stress associated with attempting to mask autistic traits by using these compensatory strategies. In a study by Livingston et al. (2019), heightened anxiety was reported in individuals who were considered “high compensators”, establishing a preliminary connection between anxiety and use of compensatory strategies. Therefore, utilizing compensatory approaches could come at a cost, but it is unclear exactly what that cost is. It’s likely that the use of these strategies impacts the mental health of individuals with ASD in the form of increased anxiety and depression symptoms, as well as taxing cognitive resources.

Often co-occurring with ASD are mental health conditions such as anxiety and depression. More than one-third of participants in an Uljarevic et al. (2020) study reported significant anxiety or depression, considerably higher than the frequency in the non-ASD population. The over-representation of anxiety/depression symptomatology in the context of ASD has been replicated many times (Strang et al., 2012). Nevertheless, contributors to this co-occurrence remain largely unknown.

I am investigating whether and, if so, which specific compensatory strategies that adults with ASD use for their social-communication difficulties are associated with exacting a toll on mental health (i.e., increased anxiety and depression symptoms). The purpose of my proposed study is to understand the underpinnings and mental health impacts of compensation in ASD. The research question guiding my project is: Is use of social-communication compensatory strategies in ASD associated with increased anxiety and depression symptoms?

### *Participants*

As part of an IRB approved protocol (#NCR202455), we will recruit ~100 adults (18+ years) with an ASD diagnosis. Inclusion criteria include having all participants meet screening criteria for ASD, based on the well-validated Autism-spectrum Quotient-28 (AQ-28; Hoekstra et al. 2011). Each item of the AQ-28 is rated on a four-point scale, and higher scores indicate more

ASD traits. To meet screening criteria for ASD, individuals will score greater than 65. Potential participants with an additional diagnosis of intellectual disability will be excluded.

*Measures*

The Social-Communication Compensation Scale is a 31-item self-report scale derived from qualitative themes developed by Livingston et al. (2020) on compensatory strategies and approaches employed by people with ASD. This scale provides a Total Compensation score and 4 subscales including Masking, Shallow versus Deep Compensation, and Accommodation.

The Generalized Anxiety Disorder 7 (Spitzer et al., 2006) is a psychometrically sound 7-item questionnaire which asks questions about anxiety symptoms over the past 2 weeks.

The Patient Health Questionnaire (Kroenke et al., 2001) is a 9-item assessment tool that asks questions about the presence and severity of each of the depression symptoms listed in the DSM-IV which has good reliability and validity.

*Research Timeline*

| Month | Participant Recruitment | Data Collection/Input | Data Analysis | Research Poster/Paper |
|-------|-------------------------|-----------------------|---------------|-----------------------|
| 1-3   | X                       | X                     |               |                       |
| 4-6   | X                       | X                     |               |                       |
| 7-9   |                         | X                     | X             |                       |
| 10-12 |                         |                       | X             | X                     |

*Expected Outcomes*

I expect to find that individuals with ASD who utilize compensatory strategies will score higher on anxiety and depression measures than individuals with ASD who do not utilize these strategies.

*Contributions to the Field*

For the first time, I am investigating whether social-communication compensation strategies that adults with ASD use are associated with increased anxiety and depression symptoms. Previous studies have utilized qualitative methods to investigate compensatory strategies, and have not focused specifically on both anxiety and depression. The cause for the co-occurrence of anxiety and depression with autism is still largely unknown. Therefore, this research would provide the framework for a more complete picture of mental health in ASD and how it can be affected by social-communication compensatory strategies, which are used by individuals with ASD with the intention of making their lives easier.

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Model Example