

The **Neurodivergent Scale for Interacting with Robots (NSIR)** (Sadownik, 2025) and the **Cyber Bullying Inventory (CBI)** (Erdur-Baker, 2007) are applied together to explore how technology can serve as either a **source of harm** or a **safe harbor** for neurodivergent individuals.

The relationship between these scales centers on the vulnerability of neurodivergent populations to online social aggression and the compensatory role that "safe" robotic agents can play.

## 1. Identifying Risk and Resilience

The **CBI** measures the frequency of both cyberbullying (perpetration) and cybervictimization (being a victim). Neurodivergent individuals, particularly those with Autism Spectrum Disorder (ASD), are often at higher risk for cybervictimization.

- **The CBI's Role:** It quantifies the level of "cyber-trauma" or social aggression an individual is facing in human-to-human online spaces.
- **The NSIR's Role:** It identifies whether the individual is finding a sense of **Social Comfort, Trust, and Safety** through interactions with robots. A high NSIR score (indicating comfort and connection) might be an indicator of resilience or a coping mechanism for someone who scores high on the CBI victimization subscale.

## 2. Anthropomorphism as a Protective Barrier

The NSIR heavily emphasizes **Anthropomorphic Connection/Kinship**, with items like *"The robot is more like me than anyone else I know"*.

- **Application to Cyberbullying:** Research suggests that neurodivergent individuals may anthropomorphize non-human entities (like robots or pets) to fulfill an unmet need for social connection that is often thwarted by bullying or social exclusion.
- **Compensatory Mechanism:** While the CBI tracks the negative outcomes of human social interaction (e.g., embarrassing messages or exclusion), the NSIR tracks the positive outcomes of robotic interaction, where the "social agent" is perceived as non-judgmental and predictable.

## 3. Therapeutic Intervention and Skill Building

Both scales are used to evaluate the efficacy of interventions designed to help neurodivergent youth navigate social spaces.

- **Detecting Bullying:** AI-based virtual companions (the interaction of which would be measured by the NSIR) are currently being developed to help adolescents with ASD **detect** cyberbullying incidents as measured by the CBI.
- **Safe Practice:** The NSIR items *"I think I can share my thinking with the robot without speaking"* (Item 3) and *"I believe that my robot is the same with me as it is with anyone"* (Item 8) highlight a space where the social "power imbalances" and "anonymity" of cyberbullying measured by the CBI do not exist.

Comparison Summary

Feature	Cyber Bullying Inventory (CBI)	NSIR (Sadownik, 2025)
Primary Measurement	Frequency of social harm/aggression in online spaces.	Level of social comfort and kinship with robots.
Social Environment	Human-to-human (Internet/SMS).	Human-to-Robot interaction.
Neurodivergent Context	Tracks high rates of victimization in ND populations.	Measures a therapeutic alternative to judgmental human spaces.
Functional Goal	Identify trauma and behavioral patterns.	Identify trust and "kinship" as social support.