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Autistic Employees, Cybersecurity, and Diversity: How the three intersect to enhance information security and privacy

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ABSTRACT

Many employment selection procedures are biased against individuals with autism as they rely heavily on skills such as appearing likeable and agreeable (Rivera, 2012). Patel (2012) discusses how autistic employees are naturally equipped to handle complex, monotonous cybersecurity and big data analytics issues more so than neuro-typical individuals due to their enhanced pattern recognition skills and focus. As such, we discuss the key benefits of employing autistic individuals as a resolution to the employee shortage issues within the cybersecurity industry and developing screening techniques to identify such individuals free of bias.

Keywords

Cybersecurity, Diversity, Autism, Information Security

EXTENDED ABSTRACT

The social model of autism views behavioral traits, such as autism, as one would any other demographic characteristic (Googley, 2011). Yet, many employment selection procedures (i.e., face to face interviews) are biased against individuals with autism as they rely heavily on skills such as appearing likeable and agreeable (Rivera, 2012). Further, individuals with autism tend to do well in jobs that require attention to detail and that are highly repetitive, i.e., information systems (Whelpley et al., 2021). But, because of their lack of social skills, such individuals often do not survive the employment screening process of many organizations. Burch et al. (2021) point out how screening individuals for certain personality traits, in particular the Dark Triad (narcissism, machivellianism, and psychopathy), is necessary because such individuals present a much higher security threat than others. Fortuitously, autistic individuals have been shown to be low in dark triad personality traits (Brown et al., 2019). Thus, one could argue that this makes them less of a security threat.

Patel (2012) discusses how, in addition to the forementioned benefit of hiring autistic employees in security and privacy, they are also naturally equipped to handle complex, monotonous cybersecurity and big data analytics issues more so than neuro-typical individuals. This is because of their enhanced pattern recognition skills and ability to focus for long periods of time. Therefore, from an information security perspective, employing autistic individuals can help to reduce the threat posed by dark triad personality traits and lack of attention to detail (with regard to security procedures) as compared to employing neurotypical individuals.

Cybersecurity incidents are constantly increasing in both frequency and size, leading to major financial losses and tainted reputation of the affected organizations. The Center for Strategic and International Studies (CSIS, 2018) estimates that the cost of cybercrimes for the global economy is about $600 billion per year. The job growth within the cybersecurity industry has led to a shortage of employees for this role. There is also a lack of relevant skills among job seekers which has resulted in a fierce competition among companies for workforce in this area (Scanlan et al., 2020). In addition, current technologies and techniques are not always effective against cyberattacks because attackers are humans and can bypass the security measures of many organizations (Patel, 2012). A more creative, less myopic, approach in this regard can be the solution. As such, we highlight the key benefits of employing autistic individuals in information security and privacy, and how to develop employment screening techniques to identify and select such individuals free of bias. Initial empirical results show that selection procedures that do not rely on situational judgment or personality tests produce the least adverse impact on autistic applicants.

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