

Article Review #2

Psychological Predispositions In Cybersecurity Based on Personality Traits

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CYSE 201: Cybersecurity & Social Science

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December 5, 2025

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Cyber security is a very important and complex interdisciplinary field. The scholarly journal article at hand that will be the basis of today's discussion is titled: *Perceived Security Risks and Cybersecurity Compliance Attitude: Role of personality traits and cybersecurity behavior*, by Mohanad Mohammed Sufyan Ghaleb and Abdisamat Sattarov. The topic is relevant to the principles of social science because they explore the human behaviors that could be predisposed based on personality traits that will lead to decision-making in the cybersecurity field. This study is vital in understanding which types of people will be best suited for creating an ironclad cyber defense program. Stated simply, the research question at hand surrounds the development of the application of "The Big Five personality theory: agreeableness, conscientiousness, extraversion, neuroticism, and openness" (Ghaleb & Sattarov, 2025) in behavioral science, to the field of cybersecurity. They have uncovered how each of these traits draw consistencies in how people behave online.

Research Question, Hypothesis Development, & Proper Variables (IV/DV)

The researchers wanted to know the true implications and correlation of these specific personality traits on cybersecurity decision-making and behaviors. Their hypothesis was a five-point hypothesis which progressed as information was gathered that states: (Ghaleb & Sattarov, 2025) The Big Five personality traits have an effect on: 1. cybersecurity behavior, 2. cybersecurity compliance attitude, 3. Cybersecurity behavior actually acts as a mediator of the relationship between cybersecurity compliance attitude and The Big Five personality traits, 4. "Perceived security and privacy risk significantly moderates the relationship of Big Five personality traits and cybersecurity behavior", and finally 5. "Perceived security and privacy risk significantly moderates the relationship of cybersecurity behavior traits and cybersecurity

compliance attitude.” The Big Five personality traits are the independent variable, because the researchers are testing how these traits influence the behavior of cybersecurity actors, while the dependent variable was the measured cybersecurity behavior. The predicted behaviors based on each personality trait would validate the experiment or not.

How was this study conducted? Data, Analysis, and Methods

The researchers used quantitative methods to create and draw conclusions from their pool of participants. These methods included: statistical analysis (including correlation and regression) to test and distinguish the relationships and predictive correlations, descriptive statistics with visual models, scales of measurement in survey-style collections, and general data collection and observation. An overall cross-sectional research design study was conducted to extract data from participants at one single point in time.

Societal Implications, Challenges, and Marginalized Groups

Issues could arise with the encouragement of the utilization of perceived risk when and if those who are in positions of power at cybersecurity firms may have a layer of their own biases towards certain marginalized groups that affect what they believe to be true about the person. A standardized screening would have to be implemented to accurately measure everyone’s personality type without the influence of biases and discrimination. Researchers identified that the lack of time severely limited the veracity of the data points, and they should be further validated. This study closely relates to module 5 and the application of psychological theories and individual motives when determining cyber behaviors and criminalities. It contributes greatly to the advancement and development of social science in technology.

Conclusion.

Ghaleb and Sattorov recognize the need for further research surrounding this growing topic including longitudinal studies to develop implications for these relationships over a period of time. Their research ultimately has created a strong basis for how to proceed, collect information, and engage participants in a controlled process. These studies should go beyond this finite sampling to test those who are working in the field without the imposed pressures of a simulation. Even if a total immersed lab was created with differing roles of cybersecurity professionals where decisions were analyzed in real time based on what the actors believed are real threats, then the outcomes could be furthered and solidified.

References

Article (Subject of the paper.)

- Ghaleb, M. M. S., & Sattarov, A. (2025). Perceived Security Risks and Cybersecurity Compliance Attitude: Role of personality traits and cybersecurity behavior. *International Journal of Cyber Criminology*, 19(1), 27–53.
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