# Exploring the Impact of Age on Cyber Security Awareness and Digital Etiquette in Adolescent Girls

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**Abstract:** The growing use of digital technologies among adolescents has raised concerns about their awareness of cyber security and digital etiquette. This study examines the impact of age on cyber security awareness and digital etiquette among adolescent girls aged 15–20 years. A total of 120 students from intermediate and undergraduate courses in government colleges in Nellore district were selected through random sampling. A structured questionnaire was used to assess their awareness. The findings indicate that older adolescents (18–20 years) show higher levels of cyber security awareness compared to middle adolescents  ones (15–17 years). The study highlights the importance of age-appropriate digital literacy programs in educational institutions.

**Introduction:** In today's digital world, adolescents are exposed to a wide range of online platforms and devices for communication, learning, entertainment, and social networking. While this exposure provides numerous opportunities, it also increases the risk of cyber threats such as phishing, online scams, identity theft, cyberbullying, and privacy breaches. Cyber security awareness and digital etiquette are essential competencies that help individuals protect themselves and behave responsibly in the digital environment.

Adolescence is a transitional stage marked by rapid physical, cognitive, emotional, and social development. The cognitive maturity and life experiences that come with age may influence how adolescents perceive and respond to cyber risks. Younger adolescents (15–17 years) may have limited exposure to digital safety programs, whereas older adolescents (18–20 years), especially college students, are likely to have more experience and access to awareness initiatives. This study investigates whether age has a significant impact on cyber security awareness and digital etiquette among adolescent girls, with the objective of identifying gaps and proposing interventions. **Sharma** et al **(2021)** in his  study on digital behavior among school children found that age and grade level significantly influenced students' understanding of online threats. Older adolescents demonstrated more caution and knowledge in handling online interactions.  **Rani et al  (2020)** reveals digital etiquette and internet usage among college students  has shown that exposure to digital platforms and structured awareness programs improve responsible digital behavior, especially in higher age groups. **Choudhary et al. (2019)** in his  research emphasized the role of digital education in reducing cyberbullying and improving awareness of privacy settings among

adolescents, showing better outcomes among older teens. The increasing digital engagement among youth, understanding age-related differences in cyber security awareness is crucial. The literature consistently indicates that older adolescents tend to be more informed and cautious in their digital behavior. However, there remains a gap in early adolescent education on these topics. This study aims to bridge that gap by analyzing age-wise variations in awareness. The findings will help in designing targeted digital literacy programs for adolescent girls.

**Objectives :**

1.To assess the level of awareness of cyber security and digital etiquette among adolescent girls.

2.To compare the cyber security awareness between middle years (15–17 years) and older (18–20 years) adolescent girls.

**Hypothesis:** There is no significant difference in the level of cyber security awareness and digital etiquette between Middle  (15–17 years) and older (18–20 years) adolescent girls.

**Methodology :**   A total of 120 adolescent girls were selected using a random sampling technique from government intermediate and undergraduate colleges in Nellore district. The sample was equally divided into two groups of  60 girls aged 15–17 years Intermediate level and 60 girls aged 18–20 years at UG level. A structured questionnaire consisting of 12 items covering areas like password safety, social media behaviour, phishing awareness, privacy settings, and responsible digital conduct was developed and validated. The data was analysed for  Mean, Standard Deviation, t-test, and p-values were calculated to analyze age-wise differences.

**Results and Discussion:**

 Table No. 1 Shows the  sample was evenly distributed across the two age groups of  15-17 years studying in Intermediate  level and  and 18-20 years studying in Under Graduate level  ensuring a balanced comparison. The equal representation allowed for fair analysis without sample size bias, thereby enhancing the reliability of results related to age impact on cyber security awareness and digital etiquette among adolescent girls.

Table No. 2 shows  a statistically significant difference in cyber security awareness between the two age groups. The mean awareness score of older adolescents (0.83) was notably higher than that of middle adolescents (0.70). The t-test value (5.03) and highly significant p-value (0.0001) confirm this difference.  The reasons for the difference might be the cognitive maturity of Older adolescents are more  developed, enabling better comprehension of abstract threats like online scams and privacy risks.  More over  Undergraduate students often receive more structured exposure to digital literacy programs through workshops, seminars, or course content. Further older girls are more likely to have handled situations involving cyber threats, making them more cautious and knowledgeable. In contrast, younger adolescents might be more passive users of digital technology, often lacking critical thinking about cyber risks. They are also more prone to impulsive online behaviour, such as oversharing personal information or clicking unknown links.

**Table No. 1 Shows  Age Wise Distribution Of Sample Of Adolescents Girls**

| S.No. | Category (Age ) | Number | Percentage |
|-------|-----------------|--------|------------|
| 1. | 15-17yrs | 60 | 50 |
| 2. | 18-20yrs | 60 | 50 |
| | **Total** | **120** | **100** |

**Table No. 2  Shows Age Wise  Distribution Of Sample On Awareness Of Cyber Security Among Adolescent Girls**

| Age | Mean | S.D | T- test | P-Value |
|-----|------|-----|---------|---------|
| 13-16yrs | 0.70 | 0.16 | 5.03 | 0.0001*** |
| 17-19yrs | 0.83 | 0.05 | | |

**Conclusion :**  The study concludes that age has a significant impact on cyber security awareness and digital etiquette among adolescent girls. Older adolescents exhibited better understanding and safer online behaviour than their younger counterparts. This indicates a pressing need to initiate cyber safety education at earlier stages of adolescence, ideally from high school level.

**Implications :**  Digital safety and etiquette must be integrated into the high school curriculum.  Schools should conduct regular awareness programs for students aged 15–17. Parents should be educated to guide their children about online safety from an early age.  Education departments should consider mandating cyber security awareness training at the intermediate level.

**References :**

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