

## **IMPACT OF ICT USAGE ON PSYCHOLOGICAL WELL-BEING OF TEENAGERS: REFERENCE TO ANURADHAPURA DISTRICT IN SRI LANKA**

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### **INTRODUCTION**

Information and Communication Technology (ICT) has become a crucial part of personal and professional life, introducing challenges and transforming communication dynamics, accessibility, and social engagement. According to Hayriye Gulec, Adéla Lokajová (2022), ICT is rapidly transforming daily life, particularly for children. Teenagers use it for self-identity development, sexuality navigation, value systems, and peer relationships. They use ICT for studying, gaming, internet access and social media.

As stated by Dk & Guruge (2020), ICT usage among youth is significantly higher than that among other age groups, with young people being more future-oriented, technologically aware, and interested than adults. As well as Thomée et al., n.d.; a qualitative study found that young individuals perceive both opportunities and risks related to information technology use. Though there are positive social and educational benefits of ICT use, scholars are currently attempting to identify whether ICT usage is destructive since it is related to psychological aspects. According to Davis (2019), well-being is a complex concept that encompasses health, happiness, and prosperity, including mental health, life satisfaction, and meaning.

It is suggested that the utilization of ICT may indeed impact mental health, although the specific causal mechanisms remain uncertain (Thomée et al., n.d.). Previous research has delved into potential explanatory factors. For instance, it has been posited that computer-related tasks can induce psychophysiological stress reactions, known as "technostress," due to occupational demands. These reactions may become conditioned to the computer work environment, resulting in symptoms associated with prolonged computer use. Other researchers have explored psychological aspects, such as the internet's role in relation to mental health (Guruge, 2020), and psychiatric features, such as internet addiction (Union, I. T., 2013). Given the widespread adoption of ICT, there is an urgent imperative to construct a model elucidating the potential links between ICT usage among teenagers and the manifestation of symptoms like depression, sleep disturbances, and stress. Weerasendera (2014) highlighted the adverse impact of ICT, particularly the internet, on the mental health of the younger generation in Sri Lanka, even citing instances of suicides associated with social media usage. Recent investigations have been conducted to explore the societal repercussions of mobile phones (Goswami & Singh, 2016) and social networks (Daffalla & Dimetry, 2014) in isolation. For instance, Goswami and Singh (2016) examined the influence of mobile phones on the younger population's well-being and discovered a negative impact on their mental and physical health. Sarwar and Soomro (2013) undertook research to assess the impact of smartphones on various facets of society, finding detrimental effects on businesses, education, health, human psychology, and social life.

Upon reviewing the existing literature within this research domain, it becomes evident that most researchers have directed their attention towards distinct demographics (O'Driscoll, Brough, Timms, & Sawang, 2010), children (Cotton, 2008), and the elderly (Berkowsky,

2012). Unfortunately, there is a conspicuous dearth of research pertaining specifically to teenagers. A meticulous examination of each research paper and supplementary data sources relevant to this research area reveals that the majority of these studies were conducted on an international scale (Cotton, 2008; O'Driscoll, et al., 2010). Consequently, it is now evident that there exists a noticeable research gap in the context of Sri Lanka concerning this area of investigation. Therefore, this study aims to bridge these gaps by examining how ICT usage influences the psychological well-being of teenagers.

**METHODOLOGY**

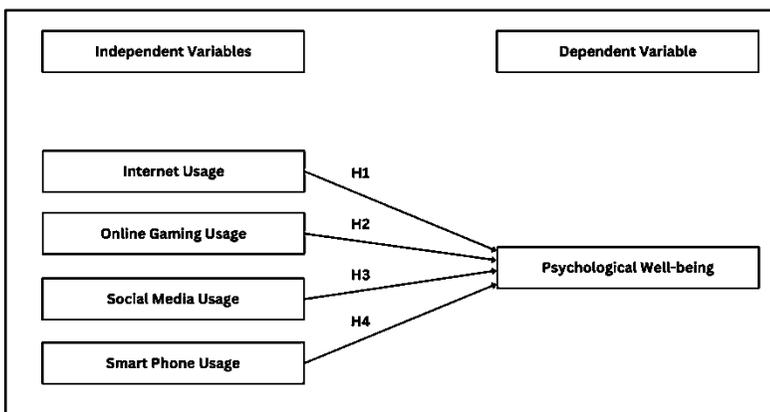
The researcher opted for a quantitative research approach given the nature of this study, which revolves around the formulation and testing of hypotheses grounded in established theory. To efficiently gather data from a broad sample while managing costs, a survey strategy, aligning with the deductive approach, was chosen. To fulfill the study's objectives, a self-administered structured questionnaire employing a five-point Likert scale (ranging from 1=strongly disagree to 5=strongly agree) was purposively distributed among teenagers. To ensure comprehensive coverage, distribution was strategically planned across various locations, including tuition classes and areas frequented by teenagers throughout the Anuradhapura district.

The population under study in the current research comprises teenagers within the Anuradhapura District, including individuals aged 13 to 19 years who are currently pursuing their education. To establish the population size, the researcher obtained data from the Provincial Department of Education - North Central Province, indicating a total of approximately 65,000 teenagers within the Anuradhapura District.

For the purpose of this study, a purposive sampling method was employed, in accordance with the guidelines provided by the Morgan table for sample size determination. The calculated sample size came to 384 participants. It is worth noting that purposive sampling represents a form of non-probability sampling in which researchers exercise their judgment in selecting individuals from the population for survey participation.

According to the Media and Technology Usage and Attitude Scale (MTUAS), the measurement of the independent variable, ICT usage, includes activities related to smartphones, social media, the internet, devices, video gaming, and television (Rosen, Whaling, Carrier, Cheever, & Rökkum, 2013).

*Figure 1*  
*Conceptual Framework*



- $H_1$ : Internet usage has a significant impact on undergraduate's psychological well-being.  
 $H_2$ : Online Gaming Usage has a significant impact on undergraduate's psychological well-being  
 $H_3$ : Social Media Usage has a significant impact on undergraduate's psychological well-being.  
 $H_4$ : Smart Phone Usage has a significant impact on undergraduate's psychological well-being.

## RESULTS AND DISCUSSION

In this study, five hypotheses were tested to identify the impact of independent variables on the dependent variable. The KMO value in each dimension is greater than 0.8, and all the Cronbach's Alpha values were greater than 0.7. The sample profile's demographic details included gender, age, grade, and ability in ICT usage. Accordingly, 64.2% of respondents are male, and 35.8% are female.

Teenagers in the age group refer to the age range of 13 to 19 years and are categorized into year 13-year 16 and year 17-year 19. Here, the highest percentage of respondents, 71.4%, represents the age group of year 17 to year 19, with the other 28.6% being represented by respondents in the age group of 13 to 16 years.

All the independent variables were significant at the 0.01 level. The level of significance between the independent variables and the dependent variable was determined using multiple regression analysis. It is found that the independent variables have a significant impact on the dependent variable.

**Table 1**

*Hypothesis Testing and Summary of Correlation and Regression*

Hypothesis	Correlation		Regression		Decision
	$\beta$	p	$\beta$	p	
$H_1$	0.836**	0.000	0.172	0.041	Accepted
$H_2$	0.833**	0.000	0.188	0.028	Accepted
$H_3$	0.835**	0.000	0.273	0.000	Accepted
$H_4$	0.828**	0.000	0.163	0.046	Accepted

Adjusted R Square = 0.744, Std. Error of the Estimate = 0.281

Predictors: (Constant), Smart\_Phone\_Usage, Social\_Media\_Usage, Internet Usage, Online\_Game\_Usage

The adjusted R square value indicates how much of the total variation in the dependent variable can be explained by the independent variables. According to the above result, 74.4% of the psychological wellbeing of teenagers can be described by the independent variables, and the remaining 25.6% of psychological wellbeing can be attributed to other factors not included in this study.

To determine whether there is a relationship between each variable and the relationship between each dependent variable and independent variables, using the correlation matrix is advantageous for the researcher. The correlation coefficient ranges from -1 to +1 for all variables. A perfect relationship between two variables is represented by a +1. Accordingly, all variables demonstrate perfect relationships.

## CONCLUSION AND IMPLICATIONS

The research indicates that the increased use of the internet, ICT for online games, social media, and smartphones by teenagers can negatively impact their psychological well-being. This can lead to increased stress, sleep disturbances, depression, and decreased productivity, thus negatively impacting the mental equilibrium of the youth demographic.

The study found a direct relationship between the use of information technology and the psychological well-being of teenagers. Therefore, school administrations and parents should work on improving the accessibility, reliability, and regulation of internet services. Education about internet addiction and its potential risks should be included in the Curriculum Implementation Support Program. Students should be provided ample opportunities to participate in extracurricular activities and socialize with peers. Access to therapists for emotional and psychological support is recommended for students overburdened by academic and lengthy posting schedules. To minimize the effects of online gaming on mental health, it is recommended to set time limits, keep phones out of the bedroom, and engage in daily activities. Parents should ensure their children play only games rated for their age. Future research should consider additional factors of ICT use and expand the study population to include all teenagers in Sri Lanka to better understand the relationship between ICT use and psychological well-being.

**Keywords:** Psychological wellbeing, social media usage, teenagers, usage of ICT

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