

Investigating The Impact of Digital Technology on Adolescent Identity Formation on Selected Students in SAIS: A Psychological Approach

Hala RJ Murad

Sharjah American International School

Abstract:- Teenagers are today living in a hybrid world that connects digital spaces to offline contexts; we are amid a global shift where digital "screens" are no longer only entertainment devices yet a major distraction. Adolescence is a period of self-actualization, self-integration, and, in the current era, consistent social media performance. Conflicts in the identity vs. role confusion stage of Erik Erikson and James Marcia theory of identity statuses model are addressed throughout this research. A survey, sent to Sharjah American International School high school students, explores the aftermath of the online metaverse impact on their identity development. The aim of the present study was to examine the interrelationships between adolescent media activity and identity development through studying behavioral outcomes to psychological analyze results. Participating in the study were 19 adolescents ages 13 to 19 (mean age 17).

The results showed identity was however negatively associated with time spent using the network on social media and communicating. On the other hand, identity style was also positively associated with adaptive media-related cognitions, such as benefiting from the online metaverse to absorb new knowledge constantly. The results are discussed regarding practical implications and recommendations for enhancing parenting styles and guidance of adolescents.

Keywords:- Adolescents, Identity, Technology, Social Media, James Marcia, Erik Erikson.

I. INTRODUCTION

➤ *Investigating The Impact of Digital Technology on Adolescent Identity Formation on Selected Students in SAIS: A Psychological Approach*

Adolescence is the shift from the start of puberty to the beginning of adulthood ("6.3 adolescence: Developing independence and identity – Introduction to psychology", 2015). Teenagerhood transitional period raises questions about their sense of identity and the ability of taking independent choices. This is the time when both disorientation and discovery commence ("Psychology Today – Adolescence", 2009). This period is between the ages 13 to 19 ("Psychological development - Puberty, identity, relationships", 1998). According to Erik Erikson theory of Challenges of Development (Erikson, 1950), the main social

focus in adolescents is the path that leads to a unique identity. The journey of search for an identity leads to a destination where one can answer the question, "Who am I?" During the journey, adolescent may experience role confusion in which teenagers are balancing or choosing among identities, adapting to a contrary or undesirable identities, or temporarily losing the spark of hope in looking for one if their faced with obstacles ("6.3 adolescence: Developing independence and identity – Introduction to psychology", 2015). Another approach to studying identity development was introduced by James Marcia (Marcia, 1980). Adolescents were questioned regarding their field of interest and biased opinions to issues related to profession, politics, religion, and behavior. The responses to the questions allow Marcia to arrange the adolescent into four different identity categories.

Digital technology is a term used for various devices or services. The usage of technology by most adolescent nowadays relies on smartphones. A wide range of varied services can be provided on smartphones and other program-oriented devices. Teens in the United States have time wasted on digital services usage with YouTube (85%) coming first in rank, closely followed by the social media platform Instagram (72%), and Snapchat (69%) showed by a representative survey (Dienlin & Johannes, 2020). In the modern digital age, adolescents are in a critical period for identity formation defined by self-exploration, the finding of a sense of self, and the accommodation of a wide social and personal identities. They are increasingly engaging with technology, which can significantly influence their psychological development of an identity ready to face the future (Dienlin & Johannes, 2020).

➤ *Statement of the Problem*

Past studies explored adolescent identity formation, yet limited research data was conducted showing the impact of evolving technology and adolescent identity development. With each new technological advancement comes concerns about its potential impact on the selected teenage groups field of interest and sense of individuality among the external environment pressure. During recent years, there was a profound rise of concerns on teenagers being influenced by technology due to the high investment on digital technology such as smartphones and social media platforms (Dienlin & Johannes, 2020). To insure whether these concerns are correct, this research paper will provide an overview of the transcending impact of digital technology use and advancement on adolescent identity formation journey.

➤ *Objectives of the Study*

- The study aims to show the impact of technology on a group of students for their identity formation experience and outcome, focusing on ages from thirteen to nineteen.
- The study focuses on analyzing the psychological correlations between the technologies influence on behavior and cognitive functioning with the backup of psychological theories of describing adolescent identity development process.

➤ *Research Questions*

The Researcher Attempts to Answer the Following Questions:

- How does social media influence the identity development of teenage students in school?
- To what extent do the identity development theories proposed by James Marcia and Erik Erikson apply to students in Sharjah?

➤ *Significance of the Study*

This study contributes to the policy extension of the researched theories done by different psychologists and helps adolescents determine the future outcome on how technology can sequel their identity formation stages. Furthermore, providing how technology is viewed by adolescents gives insight into how technology can be used in crucial environments, such as in their households and schools. That will ensure that educators and parents can benefit from this study because they can recognize the impact and guide adolescents to a stable identity to navigate an effective role in the adulthood stage. (Frederick, Hoppock, Liskey, & Brown, 2014).

➤ *Structure of the Study*

The first chapter introduces the topic of the study and the statement of the problem. It also conveys the objectives of the study, research questions, and the significance of the study.

The second chapter provides background information about Adolescence during their lifespan as well as the psychological theories that have been stated by previous researchers. The other part of the chapter goes deeper into analyzing the various aspects of the impact technology has on adolescents in several forms. Defining and describing both concepts helps the reader to obtain a better picture of the context presented with empirical findings and the relationship between digital technology use and adolescent identity formation.

II. LITERATURE REVIEW

This chapter provides a detailed explanation on the adolescence stage during the individuals lifespan with correlation to studied psychological theories on the identity development journey of the adolescent by different psychologists and qualified researchers. It will also shed light on how the advanced digital technology of the 21st century

have had an influence on the youth formulating an identity among members of society.

A. Adolescence

Adolescence is when an individual ages between 13 to late 19s, during which a young person no longer has a physique of a child but is not yet a mature, self-supported adult (Marcia, 1980). There are 1.3 billion teenagers in the world, with an obvious gradual increase, making up 16 percent of the population today (“Adolescence Statics”, 2023). Past studies had defined adolescence as when the young person has hit the age of being laded as a teenager among society, but however, being an adolescent isn’t necessarily determined by a slandered chronological age. This stage of life is determined when an individual can prove they could deal with life issues such as work, family, and relationships. Adolescence may last longer or end quicker for different individuals (Ciccarelli & White, 2021, p.348).

B. Adolescence Stages

Adolescence may feel like a very complicated journey for both, the parents, and the teenager, because both of them must just expect the unexpected. Confusing as it seems, adolescence is a process everyone goes through. A sequenced changes, tensions, problems, and conflicts emerges as a form of an algorithm. Therefore, anticipating the stages of adolescence may help ease some of the unexpected issues that parents must face to guide their teen effectively (Pickhardt, 2009).

➤ *Stage One:*

- Letting Childhood Go. Early Adolescence around ages 9 to 13, conflicts can range from the increases of personal disorganization as more messiness, forgetfulness, distractibility, inattention, and losing things begin. Now the self-management structure that fit childhood becomes poor to effectively coordinate with the more psychologically and socially complex adolescent experience. Leading to an increase in the negative behaviour due to couple of factors like no longer being pleased to be called and be treated as a child, less interested in traditional childhood activities and the heightened feeling of boredom and deprivation from having a blurry vision of the future, carrying a grievance about unfair demands and limits on personal freedom that adults around them impose. Teenagers tend to develop a persistent and ignorant resistance, so they question authority frequently, disobey rules, delay compliance with parental requests, let normal home and school responsibilities like chores and assignments slide. Boundaries will often conduct the adolescent to adopt experimentation and assise their limits to see what can be gotten away with, this can range from activities that are illegal like shoplifting and vandalizing to silly action like prank calls (Pickhardt, 2009). Teenagers commit about 25% of shoplifting offenses, and that is according to shoplifting statistics (“Teens Shoplift”, 2013). Now for parents, this stage is when behaviour seems to undergo a change for the worse, so they must challenge themselves to insist on teaching responsible behaviour to their teen

while maintaining a positive connection during this early age of adolescence (Pickhardt, 2009).

➤ *Stage Two:*

- **Peer Pressure.** Mid Adolescence around ages 13 to 15, heated conflict over social freedom with parents, particularly the freedom of socializing with a certain friend or a friend group. More lying to escape consequences from wrongdoing or to get to do what has been forbidden rises. Also, the steady peer pressure to go along with adventures and risk-taking conditions, including more pressure to tolerate harmful substances to be accepted. The Monitoring the Future survey is conducted yearly by researchers at the University of Michigan, Ann Arbor. The survey found that during mid adolescence the most reported use was alcohol, nicotine vaping, and cannabis due to peer pressure in the year 2022 ("Most reported substance use among adolescents held steady in 2022", 2022). When the young person has become ruled by the need for instant gratification and social conformity among friends, the challenges facing the parents is to give harsh commands and have a firm stand for the best interests for their teenager (Pickhardt, 2009).

➤ *Stage Three:*

- **Acting More Mature.** Late Adolescence is the age range from 15 to 18. Teens are now more independent from often practicing grown-up activities such as part time employment, getting a car licence, and recreational smoking and substance use at a social hangout. Teens notice a significant emotional growth and involvement in a closer relationship with a close circle of peers. Grief sparks over the separation after graduation from old mates and perhaps to some individuals leaving family behind during the following years of university (Pickhardt, 2009). It is estimated globally that 1 in 7, approximately 14 percent, of adolescents experience mental health conditions, yet these disorders remain unrecognized and untreated until it is too late. Teens with anxiety attacks condition are particularly vulnerable because of the unreadiness to undertake more worldly self-reliant actions ("Mental Health of Adolescence", 2021). Parental role in this stage is when their child demands for unrestricted freedoms that can be dangerous to control, parents are challenged to insist on sufficient communication with their teen so they can stay informed and understanding of his requests.

➤ *Stage Four:*

- **Escaping Responsibility.** Trial Independence starts around ages 18 to 22. Lower self-esteem emerges from not being able to successfully complete all demands and keep all the commitments of adulthood tasks. Adolescent feels an increase in anxiety levels from not having a vivid plan for their path in life or the self-discipline to consistently pursue their journey if the future road is clear. Cohort peers within the same age group are also confused about

their future directions too, so they start partying more to deny problems or escape responsibility. This will eventually negatively influence the teenager leading to high distraction and a stage of the highest toxic substance use begins. For parents this stage when cruel reality hits their teenager when they are away from parental vision, self-government and support commence, so their challenge is to respect individual decision making and allow full consequences, to give guiding advice when they are questioned and they must not interfere if bad choices were made, and finally to trust in their teenagers abilities to learn and grow from mistakes (Pickhardt, 2009).

C. Identity

Identity includes the memories, experiences, relationships, and values that are the campus to guide an individual to develop a sense of self. Over time, this combination creates a growing sense of who an individual is, even new characteristics are developed, forming into a unique identity. Everyone has an inner quarrel with questions such as, "Who am I?" and "What do I want to be in the future?" This can contribute to people holding multiple identities, such as their identity as a teacher, friend, partner, and parent (Heshmat, 2009). Identity forms also based on external characteristics such as biological traits, ethnicity, or his status among the economical dynamics. Identity can include political judgment, moral values, and religion claims, all of which guide the choices made occasionally ("Identities", 2009). The minority of people are wise to choose a unique identity. Instead, they simply adopt the values of their parents or their surrounding societies cultures. This can be by the pursuit of materialism, power, and appearance. These values may not be aligned with one's genuine and real self and create an unpleasing life. In contrast, pleased people can live a life without external influence and pursue ambitious goals (Heshmat, 2009).

D. Cognitive Development

Most adolescents think that they are one of a kind, unlike others, that trouble just will not come their way. This mindset can lead to high-risk taking behavior. The cognitive development in teenagers undergoes a major transformation in the individual self-perception, their connections with people around them, and their behavior towards external cues (Ciccarelli & White, 2021, p.349). The prefrontal cortex, the area of the brain responsible for reasoning, planning, and problem solving, also continues to develop as teenagers grow (Goldberg, 2001).

➤ *Piaget's Theory of Formal Operation*

Adolescence who participates in a formal high school education will develop a complex thinking processes that psychologist Piaget defined as the final stage of formal operations (Ciccarelli & White, 2021, p.349). This stage includes abstract thinking or the ability of thinking about hypothetical possibilities that share the same outcome, the ability to reason from previous knowledge and creating new ideas and questions on common principles, the ability to switch between frames of reference according to varying criteria, like being able to compare or counterclaim ideas or

opinions of others, and the ability to introspect oneself (Wisconsin, 2023).

Teenagers are yet still not free of egocentrism thoughts although they are on the path of discovering an adult style of thinking. Egocentrism in teenagers is presented by the extreme concern with their own thoughts (Rai et al., 2014). Using introspection mechanism may convince teens that their internal judgment is accepted to others just like it is to them (Vartanian, 2000). Adolescents experience egocentrism when they emerge the idea of a personal fable and imaging fictional audience (Potard et al., 2017).

- *Personal Fable.* Adolescents are convinced that they are the centre of the world, so special, that no one considered thinking to themselves about their internal feelings and thoughts before them. “You just don’t understand me, I’m different” is a common phrase shared by teenagers. When teenagers experience personal fable, they adopt dangerous behaviours due to the thought of being special. They tend to not take precautionary measures because they think they are protected from dangers surrounding them. This may result in a severe injury, death because of drinking or texting while car driving, illegal car races, drug abuse, these are just a few possibilities (Ciccarelli & White, 2021, p.350).
- *Imaginary Audience.* Adolescents believe that they are the centre of the world to everyone just as they are to themselves and that they can do anything better than anyone else, including their parents (Elkind, 1978, p. 199). According to Goossens, Beyers, Emmen, & van Aken (2002), Teens show extreme self-consciousness concerning how other individuals perceive them (Ciccarelli & White, 2021, p.350).

E. Psychosocial Development

Personality and social connections developments are the primary concerns for an adolescent searching for a consistent sense of self or a unique personal identity (Ciccarelli & White, 2021, p.351). This development takes place when the adolescent chooses to diminish parental authority and gets more easily influenced by peers (Harris, 1998).

➤ Erik Erikson Theory of Identity VS. Role Confusion

The psychosocial crisis that must be faced by the adolescent is identity versus role confusion, according to Erikson. In this stage, the teenager must alternate and pick among many ideas of different values in life and varied beliefs concerning things such as political and career pursuit, and intimate relationships (Feldman, 2003). From choosing and experiencing several options, a stable sense of self must be developed. Erikson (1958) believed that teens who have successfully navigated their paths of the earlier four stages are much better at resisting peer pressure to engage in illegal or harmful activities and find their own individuality during the adolescence stage. However, those teens who are not as successful in reaching the late adolescent years will face issues that revolve around the lack of trust in others, feelings of guilt and shame, low confidence, and throwing their responsibility on others (Ciccarelli & White, 2021,

p.351). Peer pressure is profoundly effective on teenagers with a shattered identity, who desperately want to conform, and who feel like an outcast if they do not meet the expectations and demands of their friend group (Hartney, 2022). They will experience being the perfect first child for the parents, the favorite pet student for the teachers, and the nonchalant juvenile delinquent to their friends and will be confused about which role do they want to continue with as an adult with their own genuine identity (Ciccarelli & White, 2021, p.351).

➤ James Marcia Theory of Identity Status Model

One approach to assessing identity development was proposed by James Marcia (Marcia, 1980). Adolescents ask questions regarding their exploration and commitment to issues related to occupation, politics, religion, and social behaviour. Studies assessing how teens pass through Marcia’s stages show that although most teens eventually succeed in developing a stable identity, the path to it is not always easy and there are ranges of routes that can be taken. Marcia (1980) claims that teens may simply adopt the persona of their parents or the first role they encounter, perhaps at the expense of looking for other pleasing possibilities. This influence is defined as foreclosure status. Other teens may take a while trying on different identities, before choosing a final one. Marcia defined this stage as moratorium status (Lally & Valentine-French, 2011).

To guide teens on working through the process of developing an identity, teenagers must be allowed to try out different identities in different social situations. They may maintain one identity at home and a different type of identity when they are surrounded with friends. Eventually, most teenagers do merge the different experiences gained by experimentation of different identities into a single self-concept and is pleasant with sense of individuality leading to the formation of an identity-achievement status. (Lally & Valentine-French, 2019). The major phenomena of what an adolescent is learning in the journey is combined into their unique social identity, the part of the self-concept that is derived from the teenager group memberships. Adolescents define their social identities according to in what ways they are similar or different from others, in categories of sports, religious, school, gender, and ethnics (Lally & Valentine-French, 2011).

F. Technology and Adolescence

Technology and social media use among adolescents had had a rise recently. Today, teens online presence sparks more than ever have before. Past studies show that in 2006, 55% of teens ages 12 to 17 used social media, and yet 48% said they used these platforms on daily bases (Lenhart 2007). Many adolescents now own devices, such as smartphones, that allow them to go online whenever and wherever they are present. According to the Pew Research Centre, 88% of American teens ages 13-17 can access a mobile phone and 73% of teens own a smartphone (Lenhart, 2015). The group of teens who own a mobile phone uses their device most of the time to enter the online metaverse, however, 94% of them checks their attends list as present online on daily bases (Lenhart, 2015).

G. Digital Technology and Adolescents Identity formation

Social media has become one of the main forms of communication among adolescents and had a huge impact on their lives. Social media is any website or platform that admits accesses to social communication and the ability for an individual to exchange ideas (O'Keefe & Clarke-Pearson, 2011). These websites include Snapchat, Facebook, Instagram, and YouTube etc. Active online activity might affect how adolescents develop their identity (Santrock, 2014).

A Pew survey found that 97% of United States teenagers are on social media platforms and approximately half of them are active online almost none stop (Anderson & Jiang, 2018). Many teens conform experiencing a bad behaviour online, including name-calling, cyber-bullying, false rumours, unrequested posted photos of them, stalking, and threats of physical harm, and that is according to the survey data. Participating on social media platforms also exposes teens to prejudiced attitudes and judgmental comments. This online social commentary may trigger some teens into a downward spiral (Yard et al., 2021). Social media platforms are seen as a catalyst, a booster, for teenagers decline. Adolescents are highly tuned for peer opinions, and those platforms enable self-bias expression by liking and commenting. Teens are also prone to form a FOMO, or fear of missing out, that drives the subconscious attention to access online accounts rapidly in a short period of time. Therefore, the digital metaverse seems to amplify pressure on some teens and influence their venerable identity as they continuously seeking social validation (Pickens, 2022).

III. METHODOLOGY

This chapter explains and describes the methods and steps that were taken to collect the data on how digital technology influence identity formation on selected students who are a part of SAIS with an age range from 13 to 19. The researchers attempted to examine and analyse the psychological coloration and compare them to previous experimented studies.

A. Description of Data

Primary data collected was mainly qualitative analysis; however, some quantitative and descriptive data was included in order to explain the percentages further. The survey contained 8 questions of different outcomes of statics targeting the demographic age group of adolescence ages from 13 to 19. The interrogations gathering qualitative data is sought to ask for the individual pattern of behaviour. Quantitate data is necessary to elaborate on the variable of time. A closed question, yes or no question, must be set to narrow the percentage of teenagers admitting the influence of technology on their identity formation. Psychology is the study of the mental process and behaviour ("What Is Psychology? | Department of Psychology," n.d.), to intertwine that into the study, individuals were able to select multiple outcomes of behaviours due to the effect of technology on their cogitative function. An open-ended descriptive question was optional to answer if the teens felt the need to further

explain and share their reasoning and extra valuable data a researcher would find precious to the matter at hand.

B. Methodology

To satisfy the objectives of the research, the student survey was only done by students in the United Arab Emirates by Sharjah American International School adolescent students. The process of collecting data was time limited due to submission purposes. The question types were varied to present different statics to back the research validity. Addressing students' engagement in submitting the form via a hyperlink proved to be challenging and failed to resonate with students. Therefore, the implementation of QR codes, distributed alongside brief persuasive discussions to encourage participation in the survey, emerged as a viable solution. The survey was sent to young males and females that share the same environment, education, and socioeconomic conditions. Participates age ranges must be from 13 to 19. Providing participants specifically aged 13 and 19 was mandatory to prove that adolescence is not defined by the chronological age but the metal shift from childhood to teen hood. The survey must not manipulate the participant to believe that technology has influenced their identity but however paves the way and sheds light on how currently it is influencing it. The researcher must request information about their age, most used digital device, the main purpose behind using the preferred selected device: educational purposes, social media platforms, news update, communication, or entertainment, and their average screen time, will help understand patterns in behaviour of the teenager. Allowing students to anonymously select multiple habits that are noticed by the majority due to the impact of the technology on the development of an identity crisis plus leaving an optional question to justify their choices by a text response will prevent the idea of biased questions and enhance the ability to derive psychological analytic correlation to the answers.

C. Rationale of the Study

The questionnaire method was a schools survey sent out using Microsoft Forms to teenage SAIS students. Microsoft Forms allowed limiting only people in Sharjah American International School to respond, sign-in with email given by the school administration was required to validate access. With this research instrument, survey participants can remain anonymous. It was a useful tool for obtaining data with the outcomes you require. Surveys provide you with the ability to compare outcomes of different individual. It provides a straightforward method to understand quantitative data analysis and visualization (Gaille, 2020).

Despite the general belief that surveys are simple to conduct, they require a great deal of organization, time, and work to generate valuable results. Surveys are essential instruments for compiling data about individual points of view (Jones, Baxter, Khanduja, 2013). To create a survey, the first and most crucial step is to know exactly what type of data you are seeking to gather. There will always be an allure to adopt a broad approach and ask as many questions as you can in the hopes of acquiring as many possible types of information. This kind of technique is ineffective since it

lowers the response rate and hinders the power of the study when it asks an excessive number of pointless or illogical questions. Therefore, while conducting the survey that will be answered by students the researcher made sure to keep the questions concise and straight to the point. Eight questions that cover multiple choice, selective choices answers, ranking, and an open text question were presented to prevent a repeat of the questions structure and increase the ability of receiving extensive data with different types to explore.

D. Procedure of the Analysis

Various aspects were taken into consideration when the results were analysed. The analysis was divided into three main categories: understanding the students environmental triggers that led to the development of pattern of behaviours, summarizing the gathered data into valid statistics and percentages, and validating the research data to psychosocial theories by Erik Erikson and James Marcia. The researcher had studied adolescences development and identity formation as a course in psychology to aid the analysis. As a researcher, you are required to go through the process of examining, purifying, converting, and interpreting data to find relevant information and a conclusion to your study. It entails using a range of computational and statistical methods to analyse and extrapolate knowledge from varied amounts of datasets, numbers, and public opinions. Transforming raw data into useful findings that can guide future procedures, other scientific experiments, and other pursuits is the ultimate goal of finding how does technology maintain authority in shaping the identity and sense of self of the future generation.

While identifying patterns in the data, conducting statistical tests, or using machine learning algorithms to identify trends and insights. Researcher must provide the psychological studies and virtual experiment by testing the issue discussed to support outcome finding. Researcher must take how technology is branching and improving every day into consideration. It is being under observation due to its gradual harm on the population as a whole and specifically teenagers because of their dominant online statues on the digital network. Moreover, technology is a double-edged sword that has two sharpened edges that has both good and bad consequences depending on how you use it. The researcher must also cover and incorporate the power of social media and its effects.

IV. DATA ANALYSIS AND DISCUSSION

A. Introduction

This chapter presents and discusses the primary data that was collected quantitatively and qualitatively using Microsoft Forms surveys; moreover, this section elaborates on summing a conclusion based on results provided. The questionnaire was targeted toward SAIS Middle and High School students between the ages of 13 -19. The data was gathered over a

period of two weeks. The total participating students who responded to the form were 19. The data was gathered through Microsoft Forms, a web-based application that allows you to create and share online surveys and was analysed using Microsoft Excel. Furthermore, various aspects were taken into consideration when analysing the data by reviewing previous psychological studies and comparing the researchers results to them. The research descriptive statistics results are presented in the form of percentages, pie charts, and bar graphs in order to effectively study how technology bends the identity of teenagers during different stages of adolescence.

B. Purpose of the Study

The purpose of the study is to explore the relationship between the impact of the heavy dependence of technology by teenagers in the United Arab Emirates on their identity formation. The research specifically analyses the merging of the relation between past psychological theories and experiments conducted, with updated data by the study on the present Generation Z. The findings of this paper provide a deeper understanding of how online networks are a potential factor of influence over the adolescent comprehension of identity shaping and in addition, the understanding of their sense of self. Furthermore, this research helps in spreading awareness of the serious dangers that possibly occur from technology and cyber communication on the adolescent demographic group.

C. Data Presentation and Discussion

The data is summarized and presented in the form of percentages, case analysis, pie charts, and bar graphs.

➤ Section A: Demographic Characteristic.

This section presents the demography of the participants in terms of their age, most used device, the main reason behind it, and social media planforms connection to the topic. The results will aid constructing a basic idea of common behaviours shared by the young demographic.

- **Participants Age Range.** The targeted students that the researcher provided with the survey form were between ages 13 to 19 to effectively study the adolescent age group.
- **Number of Teenagers According to Age.** In the analysis, the age of the teens ranged from 13- to 19-year-olds. There was a total of 19 cases from different ages. None were aged 12 and beyond or above 19; 13 years old, one participant: 5.26%, 15 years old, five participants: 26.32%, 16 years old, four participants: 21.05%, 17 years old, eight participants: 42.11%, 19 years old, one participant: 5.26%, 14- and 18-years old data was irrelevant to the study since there were no response by those ages

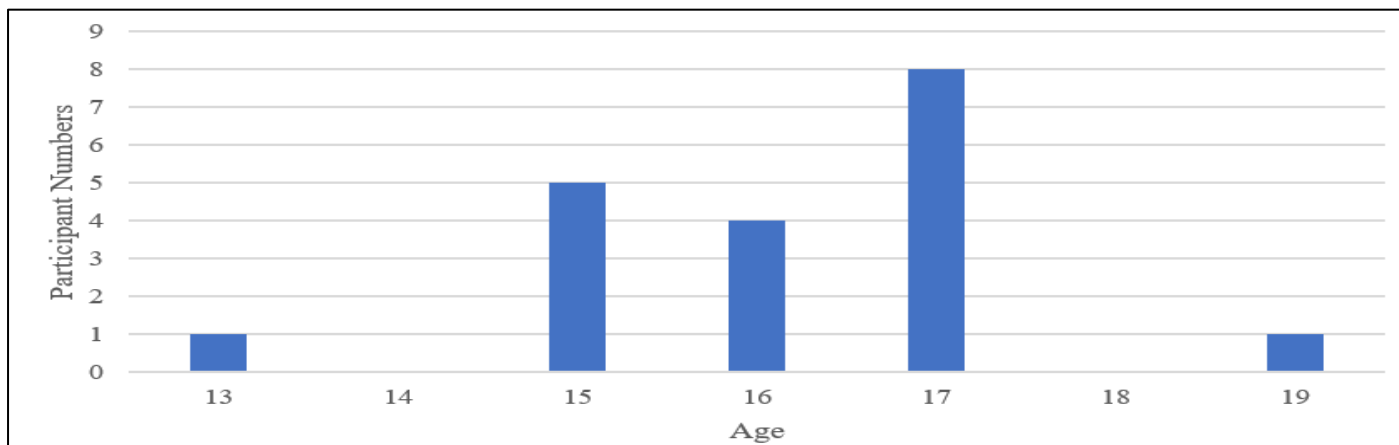


Fig 1: Number of Participants According to Age

- The Most Used Digital Device.** The researcher provided a multiple-choice question that allowed responders to choose the device that is used on daily bases by teenager. Most of the total, 85%, settled on smart phone. Previous studies have offered theoretical and empirical evidence for the fact that teenagers smartphone is becoming a common equipment for them (Yoon & Yun, 2021). The device's pervasive negative consequences reflect how it undermines emotions and health (dependency, stress, psychological issues), which directly impacts identity formation. However, studies conducted by the public have tended to concentrate on the drawbacks of smartphones. Although using a smartphone might have negative effects, it can also help students reach their goals, participate in flexible mobile learning, and obtain vital information about potential future success. Furthermore, teens who use smartphones have better development of their digital literacy, are given access to digital resources for education and new academic chances through entertainment and mobile learning (Ricoy Et all., 2022).

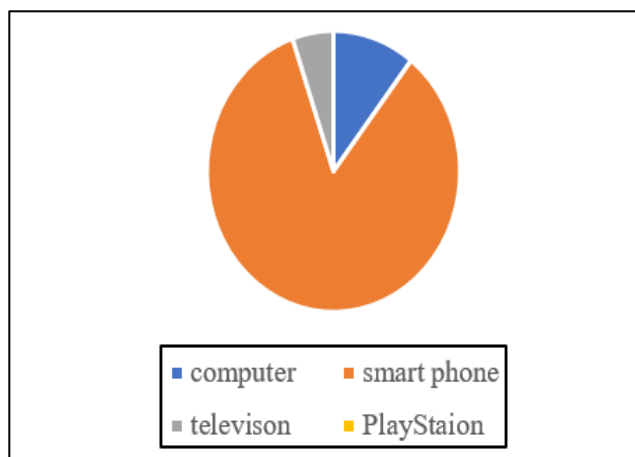


Fig 2: Most Used Digital Device

- The Chief Reason for Choosing the Device.** To further discuss the previous question, the researcher had to ask what is the core reason that shaped their decision on choosing that certain device. The total of 19 participants (100%) were asked to choose from different categories of preference; Education: 2 participants (11%), social media

platforms: 7 participants (37%), news reports: 0 participants (0%), communication: 4 participants (21%) entertainment: 6 participants (32%). Teenagers who selected news reports were at zero percent; younger audiences, often under 35, claim that the news has a negative effect on their mood. In particular, the longstanding criticism of the depressing or overwhelming nature of news persists among young people (Eddy, 2022) However, they might not be interested to watch news on television channels, yet they are absorbing news all the time from social media and other indirect means (Pitt, 2021). Social media is a tool of communication and entertainment; this supplements that 17 participants out of 19 (90%) use their device for the purpose of social interactions and pure enjoyment other than an intentional knowledge gathering method.

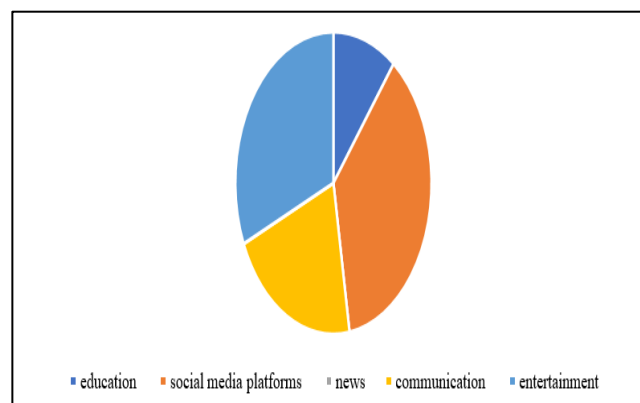


Fig 3: The Chief Reason of Choosing the Device

- Social Media Platforms Ranking.** Responders ranked Instagram as first most used app, then comes TikTok, follows that snapchat, and finally YouTube ranking last. According to the data collected, teens use Instagram more than any other social networking platform. The photo- and video- sharing software, Instagram, is used by teenagers "to meet people who share their interests and passions, celebrate life's significant occasions, share everyday moments, stay in touch with friends and family, and create supportive communities," (Herold, 2018). Other survey that was conducted on a broader scope was the biannual Piper Sandler "Taking Stock with Teens," which posed a

series of questions on numerous sectors to 10,000 teenagers in the United States. According to Canales (2021), out of the six platforms, Instagram has the highest

percentage of users—81 percent—among those questioned. Moreover, 77% of respondents indicated they use Snapchat, while 73% claimed they use TikTok.

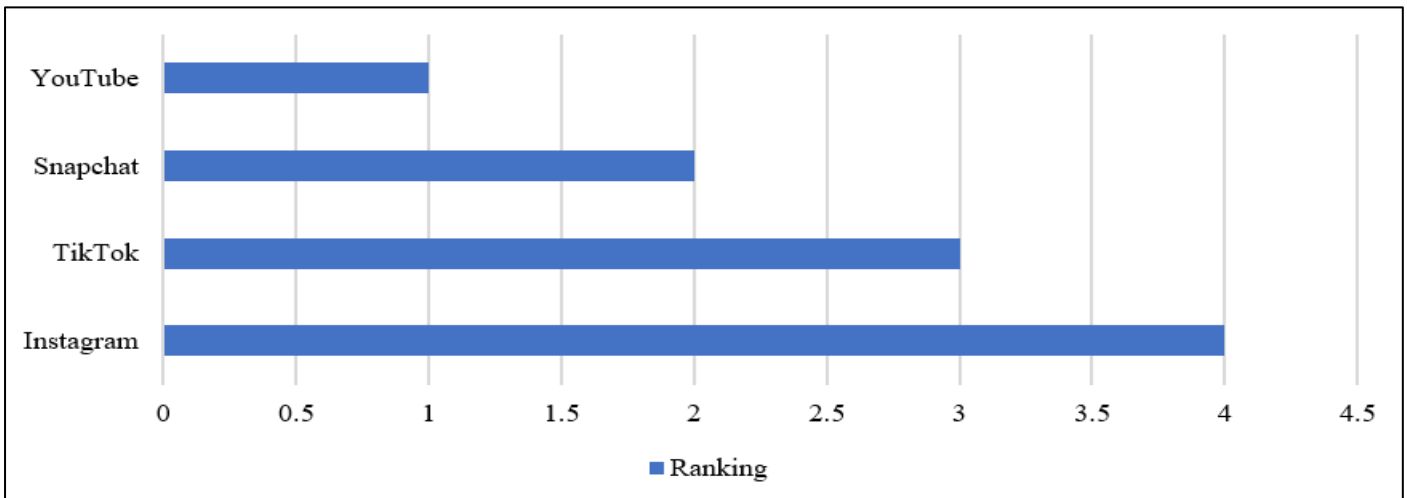


Fig 4: Ranking Preferred Apps By Teenagers

➤ *Section B: The Behavioural Outcomes*

This section presents the analysis of the participants behaviour in terms of statistical data by charts and gives insight on its psychological context. Further below, the researcher will discuss average screen time of teenagers, the influence of technology on the teenager journey of identity shaping, and how the variable of time and technology lead to negative behaviour. The results will allow a wider view on how to relate each case to Erikson and Marcias theories on students in the United Arab Emirates.

- **Average Screen Time Percentage.** Based on the data, the adolescent screen time ranges from 1 to 10 hour per day depending on the individual. This must have a direct impact on their identity offline. High screen exposure will ensure a bend in behaviour to play off during interactions with the social environment. Summing that in total, 95% adolescents selected yes to technology having an impact on their identity formation and development during early adolescence until late adolescence.

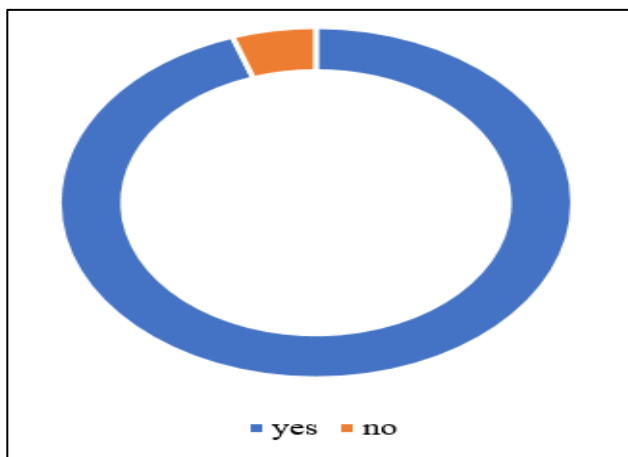


Fig 5: Adolescents Respond

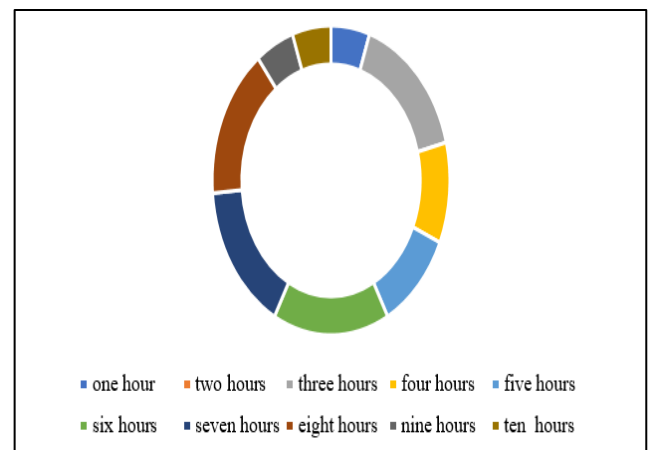


Fig 6: Hours Spent on Screens

- **Behaviour Influenced by Technology Use.** Illustrated by the bar graph are multiple behaviours psychologists drew attention to during adolescence. This will further show how the digital interference contribute to the behaviour reflected by teens. Usually, teens undergo physical, emotional, and cognitive changes leading to deviation to the norms. The teenager here is faced with obstacles to secure a stable unique identity among their peers, this leads them to take the discovery path. During this phase of transition, teenagers may have to make difficult decisions regarding their education, friendships, and substance use like drugs and alcohol. These decisions can end up as internal queries regarding their autonomy and identity as they develop an awareness of their self.

In the borders of the Sharjah, United Arab Emirates, data had shed light on how technology is a dominant factor that shapes the behaviour of teenage students. The highest shared behaviour was anxiety. The second highest was a tie between having an unclear vision of future role in society and anger issues. Identity crisis and uncertainty about the future was displayed at this stage, validating Eriksons theory.

Following was conformity and isolation at third, even though these behaviours require two different skills, two attribute behaviours which are being extroverted or introverted, yet they share the same amount of individuals battling the issue. Coming fourth, psychological disorders and specially eating disorders, both outcomes must lead individuals to consulting a psychiatrist to navigate their way out of the issue. Finally, was depression with no votes, to justify that, depression is a

heavy disorder to label yourself as without being diagnosed. Teenagers often hide any signs of risky behaviour practiced from the public judgment; supporting that claim was the personal fable and imaginary audience theory discussed. Risky behaviour such as reckless driving, smoking, or substance abuse are matters teenagers will protect themselves by not sharing any details to a formal survey.

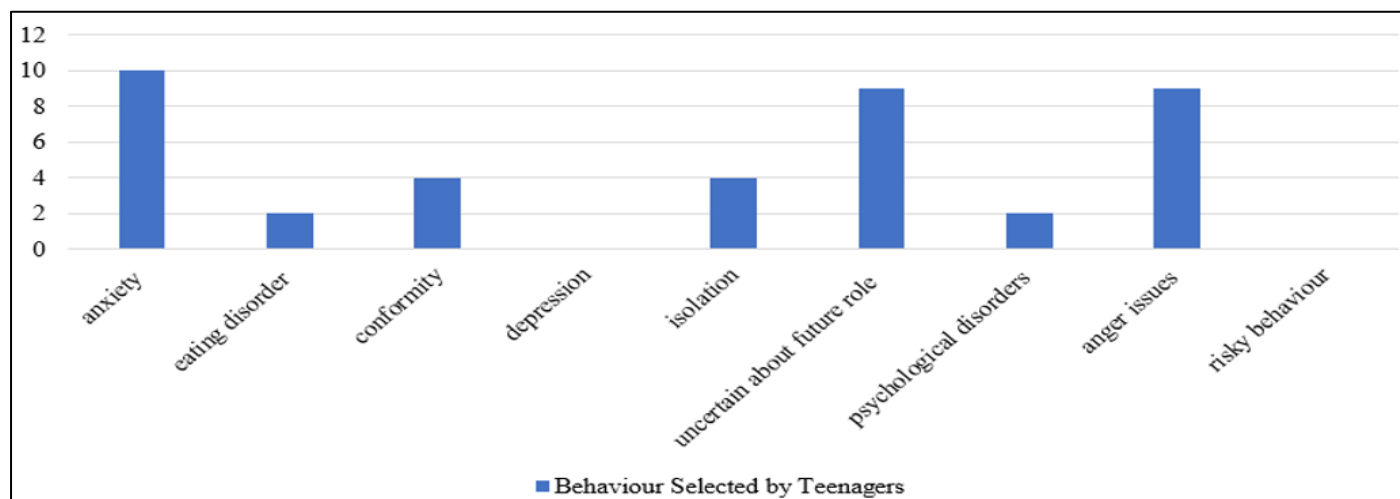


Fig 7: Behavioural Outcomes

- *Open Ending Question: “How did technology influence your identity during your teenage years.”* This question was designed to gather descriptive data to further elaborate and shed light on the respondent point of view on the previous questions answered. The researcher presented the question as optional responses, eighteen students choose to share their story. Seven respondents (39%) answered social media had a major role in shaping their identity. Technology helped some in forming their identity, but to others it was the opposite. For a minority group of students, they were standing on the grey area in which in times technology serves a positive impact but other times a negative one. All responses are identical to the ideas by the theories of Erikson and Marcias, giving my research validity and credibility.

V. CONCLUSION

A Microsoft Forms survey, sent to SAIS high school students, explores the aftermath of the online metaverse impact on their identity development. Microsoft Forms is a web-based application that allows you to create and share online surveys, quizzes, polls, and forms. You can invite others to respond to it using any web browser, even on mobile devices. As results are submitted, you can use built-in analytics to evaluate responses. You can also export results to Excel for additional analysis. Microsoft Forms can be used to collect feedback, measure satisfaction, test knowledge, and more. The aim of the present study was to examine the interrelationships between adolescent media activity and identity development through studying the behavioural outcome. Participating in the study were 20 adolescents ages 13–19 years (mean age 17).

This paper presented and discussed the primary data that was collected quantitatively and qualitatively and provided conclusion based on results provided. The findings were divided into two different sections: the demographic information and the psychological analysis of certain participates response. The total participating students who responded to the form were 19. Furthermore, various aspects were taken into consideration when analysing the data by reviewing previous psychological studies researched by Erik Eriksons, James Marcia, and Jean Piaget's then moreover compared the researchers results to them. The research descriptive statistics results were presented in the form of percentages, pie charts, and bar graphs in order to effectively correlate how technology bends the identity of teenagers during different stages of adolescence by uncovering the behavioural patterns.

The research can help the educators, professionals, and specifically parents, in understanding the adolescence stage and how it shapes their identity development. Researchers with an interest in the study of psychological theories of Erik Erikson and James Marcia on adolescents would gain insight through this paper. Researchers will find the findings valuable as there is a gap in research in this particular field correlating to technology and region perimeter. The results build on existing evidence of past research and studies conducted on a different scale about similar topics. The findings do fit with the theory of Identity VS. Role Confusion and Identity Status Model. As upon conducting the Microsoft Forms servery on students ages 13-19. The researchers found significance in the relationship of virtual reality and technology on the behaviour that shapes their identity. The results of the study should be taken into account when considering studying adolescence,

guiding teenagers, and how to moderate teens access to the digital metaverse due to its impact. The data acts as a helpful reference to show the urgency of the matter. In all, within this research study, critical new data has been discovered that serves an essential role for the understanding of UAE youth students and community.

ACKNOWLEDGEMENTS

First and foremost, it is genuine pleasure to express my deep gratitude and interminable thanks to my British Literature teacher, Ms. Shatha Melies for providing unconditional support and constant feedback throughout my research study process. I found honor in being her student, because seeing the researcher I am today reflects the hardworking English department HOD she is. Without the expertise and knowledge provided, the version submitted would not have been written to such high standards. Secondly, I am ecstatic to write this paper about subjects I found appealing to me during my study journey of high school. Therefore, I would like to extend my sincere appreciation and thanks to my past educators in the field of psychology and sociology for being the individuals who sparked the interest within me in those fields.

Moreover, I must ensure a proper thanks to my parents for their trust in me to pursue what I am passionate about and their continuous encouragement and undoubted in my abilities to reach my best potential. On the last notes, I would like to share a special thanks to the SAIS community, especially the participating students for contributing on filling the Microsoft Forms survey that helped me in shaping conclusions to fulfill my objectives and research questions.

REFERENCES

- [1]. *Adolescence*. (n.d.). Psychology Today. <https://www.psychologytoday.com/us/basics/adolescence>
- [2]. Canales, K. (2021, October 7). Teens still really love Instagram, even as they abandon Facebook's core app that's been taken over by their parents. *Business Insider*. <https://www.businessinsider.com/instagram-facebook-teenagers-social-media-use-piper-sandler-survey-2021-10>
- [3]. *Cognitive development | Children's Wisconsin*. (n.d.). <https://childrenswi.org/medical-care/adolescent-health-and-medicine/issues-and-concerns/cognitive-development#:~:text=What%20cognitive%20developmental%20changes%20occur%20during%20adolescence%3F%20During,thinking%20to%20formal%20logical%20operations%20occurs%20over%20time>
- [4]. Del Carmen Ricoy Lorenzo, M., Carrera, S. M., & Martínez-Carrera, I. (2022). Social overview of smartphone use by teenagers. *International Journal of Environmental Research and Public Health/International Journal of Environmental Research and Public Health*, 19(22), 15068. <https://doi.org/10.3390/ijerph192215068>.

- [5]. ECranston. (2019, May 5). *Social media influencers have influenced the identity formation of teenagers – debating communities and networks X*. <https://networkconference.netstudies.org/2019Curtin/2019/05/05/social-media-influencers-have-influenced-the-identity-formation-of-teenagers/>
- [6]. Erik Erikson. (n.d.). Department of Psychology. <https://psychology.fas.harvard.edu/people/erik-erikson>
- [7]. Gaille, L. (2020, January 10). *20 Advantages and Disadvantages of survey research*. <https://vittana.org/20-advantages-and-disadvantages-of-survey-research#:~:text=List%20of%20the%20Advantages%20of%20Survey%20Research%201,the%20opportunity%20to%20compare%20results.%20.%20More%20items>
- [8]. Herold, B. (2022, July 18). Instagram and teens: What do you need to know? *Education Week*. <https://www.edweek.org/technology/instagram-and-teens-what-do-you-need-to-know/2018/09#:~:text=Teens%20use%20the%20photo-%20and%20video-sharing%20app%20%E2%80%9Cto,and%20interests%2C%E2%80%9D%20according%20to%20Instagram%E2%80%99s%20new%20parent%20guide>
- [9]. Heshmat, S. (2014, December). *Basics of identity*. <https://www.psychologytoday.com/us/blog/science-choice/201412/basics-identity>
- [10]. *Identity Self-Image, Self-Concept*. (1 B.C.E.). Psychology Today. <https://www.psychologytoday.com/us/basics/identity>
- [11]. Jones, T., Baxter, M., & Khanduja, V. (2013). A quick guide to survey research. *Annals of the Royal College of Surgeons of England*, 95(1), 5–7. <https://doi.org/10.1308/003588413x13511609956372>
- [12]. Lally, M., & Valentine-French, S. (2011). *Introduction to Psychology*. College of Lake County Faculty. <https://dept.clcillinois.edu/psy/IntroductionToPsychologyText.pdf>
- [13]. Lally, M., & Valentine-French, S. (2018). *LIFESPAN DEVELOPMENT: A Psychological Perspective Second edition*. College of Lake County Faculty. <https://dept.clcillinois.edu/psy/IntroductionToPsychologyText.pdf>
- [14]. Libretexts. (2021b, January 4). 15.2: James Marcia – *Theory of Identity Development*. Social Sci LibreTexts. [https://socialsci.libretexts.org/Bookshelves/Early_Childhood_Education/Book%3A_Child_Growth_and_Development_\(Paris_Ricardo_Rymond_and_Johnson\)/15%3A_Adolescence_-_Social_Emotional_Development/15.02%3A_James_Marcia_Theory_of_Identity_Development](https://socialsci.libretexts.org/Bookshelves/Early_Childhood_Education/Book%3A_Child_Growth_and_Development_(Paris_Ricardo_Rymond_and_Johnson)/15%3A_Adolescence_-_Social_Emotional_Development/15.02%3A_James_Marcia_Theory_of_Identity_Development)
- [15]. *Most reported substance use among adolescents held steady in 2022 | National Institute on Drug Abuse*. (2023, December 22). National Institute on Drug Abuse. <https://nida.nih.gov/news-events/news-releases/2022/12/most-reported-substance-use-among-adolescents-held-steady-in-2022>

- [16]. MSc, E. H. B., MA PhD. (2022, October 6). What is peer pressure? *Verywell Mind*. <https://www.verywellmind.com/what-is-peer-pressure-22246>
- [17]. Pickens, J. (2022, April 24). *Adolescents and social media*. *Psychology Today*. <https://www.psychologytoday.com/us/blog/psychology-through-technology/202204/adolescents-and-social-media>
- [18]. Pickhardt, C. E. (2009, February 2). *A roadmap to adolescent growth*. *Psychology Today*. <https://www.psychologytoday.com/us/blog/surviving-your-childs-adolescence/200902/roadmap-adolescent-growth>
- [19]. Pitt, A. (2021, September 3). Young people are not watching TV news, but they still want to know about the world. *The Guardian*. <https://www.theguardian.com/commentisfree/2019/jul/26/young-people-tv-news-know-about-the-world-media>
- [20]. *Psychological development | Definition, Stages, Examples, & Facts*. (2024, March 15). Encyclopedia Britannica. <https://www.britannica.com/science/psychological-development/Adolescence>
- [21]. Publisher, A. R. a. R. O. O. (2015b, October 26). *6.3 Adolescence: developing independence and identity*. Pressbooks. <https://open.lib.umn.edu/introapsyc/chapter/6-3-adolescence-developing-independence-and-identity/>
- [22]. Sanchez, A. (n.d.). *The effects of social media on adolescent identity formation*. https://www.csustan.edu/sites/default/files/groups/University%20Honors%20Program/conference/06_sanchez_social_media_and_identity_formation.pdf
- [23]. *Teen Shoplifting – Troubled Teen help*. (n.d.). <http://www.familyfirstaid.org/issues/teen-shoplifting/#:~:text=According%20to%20shoplifting%20statistics%2C%20teenagers,commit%20about%2025%25%20of%20shoplifting%20offenses>.
- [24]. *The changing news habits and attitudes of younger audiences*. (n.d.-b). Reuters Institute for the Study of Journalism. <https://reutersinstitute.politics.ox.ac.uk/digital-news-report/2022/young-audiences-news-media#:~:text=Most%20often%2C%20younger%20audiences%20%28under%2035%29%20say%20the,overwhelming%20nature%20of%20news%20persists%20among%20young%20people>.
- [25]. UNICEF. (2024, April 19). *Adolescents Statistics - UNICEF DATA*. UNICEF DATA. <https://data.unicef.org/topic/adolescents/overview/>
- [26]. *What is Psychology? | Department of Psychology*. (n.d.). <https://psychology.osu.edu/about/what-psychology>
- [27]. World Health Organization: WHO. (2021, November 17). *Mental health of adolescents*. <https://www.who.int/news-room/factsheets/detail/adolescent-mental-health>
- [28]. Yoon, M., & Yun, H. (2021). Relationships between adolescent smartphone usage patterns, achievement goals, and academic achievement. *Asia Pacific Education Review/Asia Pacific Education Review*, 24(1), 13–23. <https://doi.org/10.1007/s12564-021-09718-5>