



RESEARCH ARTICLE

The Covariates Factors on Adolescent Personality Development among TARUMT Student in Livelihood Settings

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ABSTRACT

Human personality development was ongoing throughout the lifespan and with events and environment situations. An uncertain event and environment with different scenarios could have an impact on the individual's personality development. The purpose of the research on this topic is to identify the various types of personality that are impacted by different varieties of factors. Therefore, we conduct various research based on different environments and events that commonly occur in people's lives. An individual experiencing in the long-term period might affect the individual's personality growth. The community we targeted to conduct our research was an adolescent group. The age of adolescence that we conduct at age between 19 to 23, and the background and life experiences throughout their lifespan to discover personality varieties from different environments. We are required to distribute the questionnaire to collect actual data by focusing on environmental factors to reflect actual personality development. The aim of this research is to discover the various impacts of personality formation by different backgrounds of scenarios for the exact relationship between personality and environment factors. Research can provide a certain psychological well-being and social development for the individuals and communities in society.

INTRODUCTION

Adolescence is a critical period in human development, when personality traits and characteristics take shape, influenced by a range of factors. This study aims to investigate the key factors that affect personality development among adolescents, focusing on a specific age range of under 18 years old to above 25 years. The study explores how environmental, social, and other external factors contribute to the shaping of personality during this formative stage. Despite its importance, there is still limited understanding of the complex interplay of factors that influence the development of

adolescent personality [28]. These influences can include aspects such as family environment, peer relationships, cultural contexts, and socioeconomic status. Understanding the impact of these factors on personality development is crucial to promoting healthy development during adolescence and beyond. Insights from this study could inform interventions and support systems for young people as they navigate this crucial life stage. Previous studies have primarily focused on specific factors in isolation rather than exploring their combined effects [29]. Furthermore, existing research may not adequately account for the diversity of experiences within the adolescent population. This study provides a comprehensive analysis of the various factors that affect personality development in adolescents, considering a wider range of influences. We use a questionnaire-based methodology to gather data from a targeted sample focusing on adolescents aged 18 to 25 years and examining the impact of gender. Not only that, we also explore the role of school behavior in personality development, considering how adolescents' experiences in educational settings can influence their characteristics and social development. In addition to that, the critical impact of family dynamics and relationships on adolescent personality, examining how family support and interactions shape developmental trajectories. In addition, one of the factors in the research investigates how adolescents affected on the internet use motives, including social interaction, information seeking and entertainment, may affect their personality development. Finally, we examine how emotional problems, such as anxiety and depression, can impact the development of adolescents, and how these emotional challenges interact with other factors. Overall, this holistic approach offers a more nuanced understanding of the interconnected factors that shape personality during adolescence, providing valuable insights into the field.

1.1 Problem Statement

The identified covariate factors could have been influenced by various events targeting adolescents. In the study that went through with the initial element, which is the age and gender of the adolescent, they have similar contact that influences their personality. The study also examined the impact of family dynamics and significant school experiences, motives on the Internet, and emotional problems on adolescents' personality development. The study shows that the impact of family can shape a person's personality development in their lives. The family with which a person grows up can change the values they believe in and the way they interact with others [20]. For example, a child from a warm, nurturing family may develop more empathetic and social personality traits, while a child from a dysfunctional family may exhibit more withdrawn or aggressive tendencies [21]. Furthermore, the absence of family members can also significantly impact the development of adolescent personalities, leading to issues such as attachment problems or difficulties in forming healthy relationships [22]. The study also highlights the significant role of school experiences, such as academic performance, extracurricular participation, and peer relationships, can foster the development of traits such as responsibility, self-discipline in adolescents [23]. For example, students who excel academically or participate in leadership roles within their school community may develop higher levels of confidence and ambition, while those who struggle socially or academically may become more introverted or experience self-esteem issues [24]. The use of the Internet also plays a significant role in the development of adolescents' personalities. Adolescents who become addicted to the Internet may exhibit changes in their personality due to the excessive amount of time spent online and the content to which they are exposed [25]. For example, excessive internet use of the Internet may lead to decreased social interaction and increased isolation, which can affect the development of social skills and interpersonal relationships [26]. Additionally, the study found that emotional problems in adolescents can have a direct impact on their personality development. Adolescents who experience emotional difficulties, such as depression or anxiety, can show changes in their personality traits [26]. For example, adolescents who struggle with depression can display decreased motivation, lack of interest in activities, and withdrawal from social interactions [30].

2.0 LITERATURE REVIEW

2.1 School behavior

Studies of the relationship of school environment as a main role of assisting adolescents' personality development with the common context like social community and educational session which could form their personal behaviors and values. Adolescents interact in the context of expectations and social life that could influence the adolescent's self-identity and personal worth. The school area provides an environment with many opportunities for many adolescents to interact or improve social interaction ability, problem solving ability, and emotional management. These abilities bring the importance of influences towards a healthy improvement of adolescents' personality characteristics. A negative impact on adolescents' personality development would also contribute based on school events unless it is not productive to improve a healthy educational environment. Several causes such as unwanted negative activities like discrimination, bullying, and low support contribute to low self-esteem, self-insecure, and negative behavior of adolescents. The social circle that depends on adolescents' preferences, which is either their parents, adult people, or dangerous behaviors that make them curious would indulge in illegal activities. Adolescents changing schools, which they would experience in different school environments, with interacting new connections with different students and guidance experiences, were also an obvious aspect for the change. They would often experience increased anxiety and loneliness. If they joined a social group at school where they often get involved or belong, they would feel less participating in the part of the social community. Middle and high school will get encouragement from teachers who score in self-concept tests which enhance their sense of personal identity sense, intelligence and social skills [10].

People's personality traits undergo changes in rank, order, stability and mean-level changes throughout a person's life. Experiences can influence a person's behavioral and emotional states, either self-selected, influenced by individual dispositions, or introduced by external entities. The process of changing personality involves identifying which continual experiences are crucial for the changes. For example, interactions with teachers or peers can influence a student's daily traits and behavior, ultimately leading to changes in their personality traits in the long run. Prolonged manifestations of trait-related states may eventually lead to changes in personality traits. Students with better impulse control scores received better grades and standardized achievement test results compared to those with lower impulse control. Students with higher impulse control were able to incorporate beneficial learning behaviors into their routine study habits, enabling them to maintain these habits despite challenges [11].

Adolescents spend more time in school than any other place outside of home. Where they can express their characteristics and develop various skills, such as social interaction, discovery of interests, and skill acquisition and mastery. Progression through school is demanding, as adolescents are increasingly expected to regulate behavior, be autonomous, and manage various tasks independently. School provides a valuable environment for analyzing adolescents' developmental pathways and understanding the factors that influence them. School life plays a crucial role in personality development, as school behavior reveals an individual's personality in a bidirectional causal nexus [37].

The development of adolescents' personalities is significantly influenced by the social context of the school setting. Teachers' expectations and demands on students are powerful socialization agents that shape their path of personality development through their observations and feedback, thus creating a strong environmental push [39].

2.2 The Importance of Family

The family environment plays a pivotal role in shaping an individual's personality development, as highlighted in numerous studies across behavioral genetics and developmental psychology. While environmental factors are significant in the development of personality traits, the variance in personalities between siblings within the same family challenges conventional assumptions about the uniformity of family effects. Factors such as birth order, age differences, sex, genetics, and unique life experiences contribute to this variability. Understanding this nuanced interplay between genetic predispositions and environmental influences is essential to unravel the intricate mechanisms through which family dynamics impact individual personalities [12].

Family dynamics significantly influence how individuals perceive themselves and others, handle conflicts, and form attachments. Research underscores the importance of a secure and affectionate family environment, particularly during childhood, in fostering healthy personality development. Factors such as parental acceptance, emotional support, and family stability contribute to a sense of security and adequacy in individuals, influencing self-esteem and interpersonal relationships. In contrast, conflicts, rejection, or lack of emotional support can lead to personality disharmonies and difficulties later in life [13].

Parental involvement, family dynamics, and communication styles significantly shape a child's self-concept and emotional well-being. Positive family relationships characterized by emotional closeness, empathy, and effective communication foster self-esteem and social development. In contrast, families marked by conflict, lack of support, or inconsistent parenting can contribute to difficulties in forming positive self-concepts and healthy relationships, leading to low self-esteem and anxiety [2].

The quality of family relationships, parenting styles, and the level of support provided significantly influence an individual's psychological and emotional growth. The early years of a child's life are particularly sensitive to the influence of the family environment, as core aspects of personality are formed during this time. Factors such as time spent with family members, the nature of interactions, and the emotional support received contribute to personality development. Neglect or dysfunction within the family can have lasting negative consequences for the well-being of an individual and social adaptation [14].

Personality development within the family context is essential for understanding individual differences over time. Individual differences in personality shape how individuals experience, interpret, and respond to developmental tasks within the family environment. Personality traits influence the cultivation of social relationships within the family, including friendships, intimate relationships, and parenting styles. Understanding how specific personality traits influence parenting behaviors at different developmental stages and family dynamics can provide valuable information on family interactions, relationships, and overall dynamics [19].

2.3 Motive of the Internet

The study aims to explore the relationships between global personality traits and specific personal and social factors with three main motives for using the Internet: information, entertainment, and interpersonal communication. The research hypothesizes that specific personal and social factors for internet use are more closely related to these motivations than general personality traits. The study also predicts that innovative internet users, especially men, will show higher interest in new software and possess strong self-efficacy beliefs about internet use. Furthermore, it examines whether people engage in internet activities that align with their primary objectives, such as sending emails for interpersonal communication and surfing for entertainment [8].

The relationship between gender and motives for internet use reveals that male adolescents tend to spend more time online and display higher rates of problematic internet use than female adolescents. Data show that males aged 16 to 24 years use the internet more frequently than women in the same age group. Various studies have found that male adolescents are more prone to problematic Internet use. Factors such as gender roles and interests, such as male adolescents' affinity for technology and computer-based activities such as video games—may contribute to these differences in usage patterns. Male adolescents can also be more open in expressing themselves in online environments compared to their female counterparts. However, the question of which gender is more at risk of problematic internet use is still debated, with some studies pointing to men as more vulnerable and others suggesting women. Recent research indicates that gender disparities in Internet use behaviors may be diminishing as Internet access becomes more widespread and diverse [15-18].

Adolescence that spans ages 11 to 18 is a critical period that influences later behavior and development. Adolescents face emotional crises and identity challenges during this time, often seeking solace online. The Internet provides anonymity, a sense of community, and global

connections. However, unlimited access without supervision poses risks such as excessive use, which may lead to addiction. This can result in social isolation, disrupted sleep patterns, and physical and psychological symptoms of addiction. As adolescents mature, their motives for Internet use may shift affecting their susceptibility to addiction. Understanding this relationship is crucial for addressing risks and supporting healthy adolescent development [15].

In conclusion, the study shows that both personality traits and personal and social factors affect the reasons people use the Internet, including reasons like information, entertainment and communication. Gender and age play an important role in how people use the Internet, with male adolescents spending more time online and facing a higher risk of problematic internet use. As adolescents grow older, their reasons for using the internet may change. These findings emphasize the need for specific guidance and support to promote safe and healthy use for young people.

2.4 Emotional problem

Emotional autonomy significantly impacts the development of personality in adolescents. It is a critical factor in fostering independence and the ability to make decisions based on personal values and interests. Adolescents with high emotional autonomy are more likely to develop a stable sense of personality, leading to greater empathy and success in managing their emotions [31].

Emotional problems in adolescence can significantly impact the development of personality. Increased emotionality experienced during this stage, including increased psychopathology involving dysregulated affect, can lead to maladaptive emotional reactions. Overall, emotional problems in adolescence can shape personality development by impacting social-cognitive processes, self-appraisal, and the neural mechanisms underlying emotions [32].

Adolescents who experience increased emotional intensity and reactivity to environmental signals are at increased risk of developing psychopathology, including anxiety and depression. Furthermore, changing social dynamics of adolescence, such as higher levels of conflict with parents and challenges in peer and romantic relationships, can contribute to emotional stress and risk of psychopathology. These emotional challenges can influence the development of personality traits [33]. The study found that there is an association between personality traits and quality of life, and this association is mediated by depressive symptoms. Furthermore, personality traits in adolescence predict mental disorders and poor functioning in the future [34].

Research has shown that personality traits, such as neuroticism and extraversion, can be affected by emotional disorders such as depression and anxiety. Studies have found that during depressive episodes, neuroticism tends to increase, and extraversion tends to decrease. Overall, while emotional problems can have some impact on personality development, the effects are generally small and can vary [35]. Personality traits have been found to be related to certain psychiatric problems. For example, neuroticism has been found to be significantly associated with major depression, anxiety disorder, and anxiety traits are associated with both neuroticism and introversion, and the ratio of correlations is approximately 2:1. This suggests that anxiety traits are associated with emotions such as fear and disgust [36].

Based on the results of the study, neuroticism has a significant positive association with depressive symptoms in adolescents. On the contrary, extraversion, conscientiousness, and perceived social support have a significant negative association with depressive symptoms. This means that higher levels of neuroticism are associated with a higher probability of experiencing depressive symptoms, while higher levels of extraversion, conscientiousness, and perceived social support are associated with a lower likelihood of experiencing depressive symptoms in adolescents [30]. Figure 1 shows the conceptual framework of covariates of personality development.

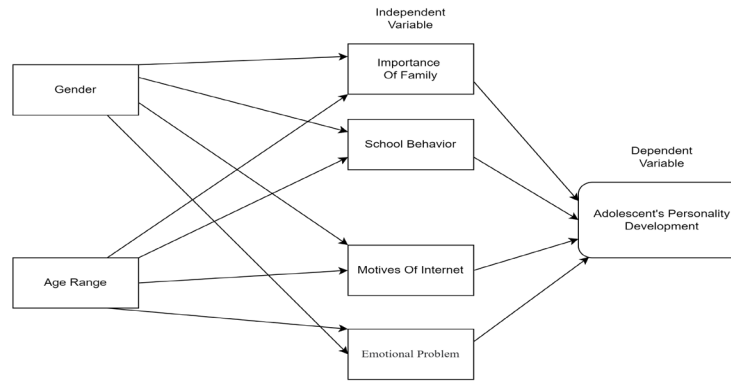


Figure 1: The conceptual framework of the study

H1: There is a positive relationship between age and the importance of family.

H2: There is a negative relationship between age and school behavior.

H3: There is a positive relationship between age and the motives of the Internet.

H4: There is a negative relationship between age and emotional problems.

H5: There is a positive relationship between gender and the importance of family.

H6: There is a negative relationship between gender and school behavior.

H7: There is a positive relationship between gender and the motives of the Internet.

H8: There is a negative relationship between gender and emotional problems.

RH9: There is a positive relationship between the importance of family and the development of adolescence personality.

H10: There is a negative relationship between school behavior and the development of personality in adolescents.

H11: There is a positive relationship between the motivations of the internet and the development of adolescent personality.

H12: There is a negative relationship between emotional problems and adolescence personality development.

H13: There is a positive mediating effect of the importance of family in the relationship between gender and adolescent personality.

H14: There is a positive mediating effect of the importance of family in the relationship between age and adolescence personality.

H15: There is a negative mediating effect of school behavior in the relationship between gender and adolescence personality.

H16: There is a negative mediating effect of school behavior in the relationship between age and adolescence personality.

H17: There is a positive mediating effect of the motives of the Internet in the relationship between gender and the personality of adolescence.

H18: There is a positive mediating effect of the motives of the Internet in the relationship between age and the personality of adolescents.

H19: There is a negative mediating effect of emotional problems in the relationship between gender and adolescence personality.

H20: There is a negative mediating effect of emotional problems in the relationship between age and adolescence personality.

3.0 RESEARCH METHODOLOGY

3.1 Population

Adolescence is a crucial developmental stage marked by significant changes in personality, behavior, and cognition. Understanding the factors that influence personality is essential to promote positive development and address potential challenges. This study aims to explore the covariate factors that contribute to variations in adolescent personality, shedding light on the complex interplay between individual characteristics and environmental influences.

The population studied comprises adolescents from various settings such as school, family, internet, and emotional. Adolescents at this stage experience rapid physical, cognitive, and emotional changes, making it an opportune time to investigate factors shaping personality development. The population includes individuals from the main campus of Tunku Abdul Rahman University Management and Technology, Kuala Lumpur, to capture the broad spectrum of experiences and contexts that may influence personality traits.

3.2 Sampling Method

The questionnaire method will be used to collect data from a sample of adolescents selected using simple random sampling techniques. We are using Google form to create questionnaires and distribute them through social media. The questionnaires consist of 4 sections, which are school behavior, the importance of Family, Motive of Internet, and the emotional problem, as shown in Table 1. Using simple random sampling techniques, we can represent the complete collection of data using a small random sample of the population, with each member having an equal chance of being selected. Therefore, we have opted to employ the simple random sampling method to distribute our survey questionnaire through our members' social media networks for data collection from individuals who meet our research criteria. The social media includes WeChat, WhatsApp, Xiao Hong Shu, and Telegram. Utilizing this sampling technique will facilitate efficient data collection from the target population in a limited timeframe. Our goal is to reach around 100 respondents within the qualified age groups via the Internet.

We created questionnaires based on a 5-point Likert scale which are divided into five categories such as strongly agree, agree, neither agree, disagree, and strongly disagree. The questions used to be analyzed to determine the positive and negative hypotheses. Both positive and negative hypotheses are based on strongly disagree-1, disagree-2, neither agree-3, agree-4, strongly agree-5. The questionnaires were separated into six different topic sections, each of the sections containing different related questions.

3.3 Analysis Method

Demographic characteristics include age and gender to show the different group statistics values of the respondents. We are using SPSS software to test both different characteristics of age and gender. Since we have age and gender as our demographic characteristic, we use ANOVA to analyze age and t-test to analyze gender. This is because the T-test is used to test hypotheses and can only be used when comparing the means of two groups to determine whether there is statistical evidence that the associated population means are significantly different, while ANOVA is used to analyze between the means of more than two groups.

We also use SPSS software to analyze Cronbach's Alpha which is a measure of internal consistency that would show how closely related a set of items is to the group. The Bivariate Correlation, which describes the phenomenon where two or more events coincide, suggesting a connection between them, we will also analyze it using SPSS software to test out some specific research hypothesis which is the relationship between importance of family, school behavior, motive of the Internet, emotional problem and adolescence personality development. Not only this, to elucidate a confirmed

association or relationship, mediating analysis is a method to analyze that by delving into the underlying mechanism or process through which one variable impact another via an intermediary variable. Which will test out the positive or negative mediating effect of four factors in the relationship between gender, age, and adolescent personality.

Table 1: Questionnaire list with item details.

Questionnaire	Option	Citation
Age	18 Below (1) 19-21 (2) 22-24 (3) 25 Above (4)	Questionnaire
Gender	Male (1) Female (2)	
School Behavior (Positive) 1. I've been studying to get good grades 2. I've been having good grades 3. I've experienced difficulties when changing school 4. Normally, I've adapted myself easily when changing the school year 8. I've had the support of my family to deal with school issues 9. I've been participating in school clubs, projects or other extra-curricular activities 10. I've had the opportunity to put in practice my talents beyond the school classes 11. I'm satisfied with my school pathway so far	Strongly Disagree 1,2,3,4,5 Strongly Agree	Carvalho & Novo (2014)
School Behavior (Negative) 5. I've had problems in the relationship with teachers 6. I've had conflicts with schoolmates 7. I don't have many friends at school	Strongly Disagree 1,2,3,4,5 Strongly Agree	Carvalho & Novo (2014)
Importance Of Family (Positive) 1. I think family is important to me. (2) 2. I celebrate different holidays with my parents and relatives: birthdays, family holidays, public official holidays or something else. (2) 3. I have someone in my family with whom I can discuss personal matters. (2)	Strongly Disagree 1,2,3,4,5 Strongly Agree	Milenkova & Nakova (2023)
4. Rank the following five different values according to their significance to you: family, education, work, friends, money. (2)	Not Important 1,2,3,4,5 Important	Milenkova & Nakova (2023)
Motives of internet-Interpersonal (Positive) 1. I receive real news through the Internet. 2. The Internet has a lot to offer: I can talk with friends and acquaintances. 3. I use the Internet because of its current information. 4. I consider the Internet as an additional mass medium. 5. The Internet updates me on new trends. 6. The Internet forces me to make choices between its many offers. 7. The Internet provides me with many things of interest that I can't access anywhere else.	Strongly Disagree 1,2,3,4,5 Strongly Agree	Wolfradt & Doll (2001)

8. The Internet helps me to solve practical problems.		
Motives of internet-Entertainment (Positive) 1. I have found new friends and acquaintances through the Internet. 2. The Internet is to me a substitute for other social contacts 3. Ever since I went on-line, I make less use of other media 4. I use the Internet to express myself 5. I use the Internet to form my own opinion. 6. The Internet makes me feel like I am close to others. 7. The Internet helps me cope with personal problems.	Strongly Disagree 1,2,3,4,5 Strongly Agree	Wolfradt & Doll (2001)
Motives of internet - Information (Positive) 1. The Internet offers more variation than other media do 2. I distract myself from school stress by using the Internet. 3. The Internet stimulates my curiosity 4. The Internet promotes my way of life. 5. The Internet helps me in passing my time.	Strongly Disagree 1,2,3,4,5 Strongly Agree	Wolfradt & Doll (2001)
Emotional Problem (Negative) 1. Even if I have already made a choice, I would easily regret and reverse it. 2. Almost every day, I worry that something horrible will happen to me. 3. Recently, I feel that I easily give up hope on everything. 4. I always feel weak and asthenic. 5. I cannot eat anything for several days after quarreling or being scolded. 6. Nobody will pity me even if I encounter any misfortunes. 7. If other people treat me well, I often suspect that they have ulterior motives.	Strongly Disagree 1,2,3,4,5 Strongly Agree	Cheung et al. (2013)
Personality Development 1. Personality - Warmth (A) 2. Personality - Reasoning (B) 3. Personality - Emotional Stability (C) 4. Personality - Dominance (E) 5. Personality - Liveliness (F) 6. Personality - Rule-Consciousness (G) 7. Personality - Social Boldness (H) 8. Personality - Sensitivity (I) 9. Personality - Vigilance (L) 10. Personality - Abstractedness (M) 11. Personality - Privatness (N) 12. Personality - Apprehension (O) 13. Personality - Openness to Change (Q1) 14. Personality - Self-Reliance (Q2) 15. Personality - Perfectionism (Q3) 16. Personality - Tension (Q4)	Range 1,2,3,4,5	Cattell & Mead (2008)

4.0 RESULTS AND DISCUSSION

4.1 Cronbach's Alpha

The application of Cronbach's Alpha is to identify the reliability of the questionnaire question in each of the sections. The formula of Cronbach's Alpha requires one to exceed the 0.7 score amount to identify the consistency and reliability of the question items, which would conclude the questionnaire

questions. Table 1 shows the result of each section of questions where the score is higher than the 0.7 rate.

Table 1: Cronbach's Alpha Analysis

Section	Number of Question	Cronbach's Alpha
School Behavior	11	0.822
Importance Of Family	8	0.830
Motives of internet	20	0.933
Emotional Problem	7	0.898
Personality Development	16	0.920
Total	62	0.963

4.2 Demographics

Based on the two tables of respondents, the first part of the table is the age result, the majority are the Age 22 - 24, forming with 52.8% of the sample population (n = 56), Second population are Age 19 - 21 concludes with the 32.1% with sample population (n = 34), the third sample population are Above Age 25 concludes with the 14.2% with sample size of (n = 15), the lease sample population are below the age 18 with 0.9% and the sample size is (n = 1). The second part of the table is the gender results; the majority of the sample population of gender is male and concludes with 41.5% with sample size of (n = 44).

The following are the general results of the demographic data tables collected from the questionnaires followed by the age and gender (Table 2).

Table 2: Age and gender of respondents.

Valid	Frequency	Percent
Age		
Below 18 Age	1	0.9%
Age 19 - 21	34	32.1%
Age 22 - 24	56	52.8%
Above Age 25	15	14.2%
Gender		
Female	44	41.5%
Male	62	58.5%
Total	106	100.0%

4.3 School behavior

H2: There is a negative relationship between age and school behavior.

The data in Table 3 conclude that there is no significant negative relationship between age and school behavior. The data results for the age range are Below 18 age (M = 25.00, SD = 4.74), Age 19 - 21 (M = 22.11, SD = 6.04), Age 22 - 24 (M = 19.85, SD = 5.29), Above 25 age (M = 21.73, SD = 5.59) in the perspective of school behavior, with the results of p = 0.220. The outcome shows that the mean age range of Age 19 - 21 with a population of 34 persons has a moderate level of effects on personality development by school behavior. The results supported the null hypothesis because the p-value was greater than 0.05 (p-value = 0.220). Therefore, hypothesis H2 is rejected because there is no significant negative relationship between age and school behavior.

Table 3: The ANOVA values the relationship between age and school behavior.

Age	Group Statistics			ANOVA	
	Number	Mean	Standard Deviation	F	Sig.
Below 18 Age	1	25.00	-	1.496	0.220

Age 19 - 21	34	22.11	4.74		
Age 22 - 24	56	19.85	6.04		
Above 25 Age	15	21.73	5.29		

H6: There is a negative relationship between gender and school behavior.

The data in Table 4 conclude that there is no significant negative relationship between age and school behavior. The outcome of the data for the gender differences of male ($M = 20.87$, $SD = 20.93$) and female ($M = 20.93$, $SD = 6.07$) in the perspective of school behavior, with the results of $p = -0.216$. The outcome shows that the mean score of the gender differences that the female has is slightly higher than that of the male ($M = 20.93$ vs. 20.87). The outcome suggests that both genders which is male and female, have similar effects on personality development by school behavior. The results rejected the hypothesis of H6 due to the p-value being greater than 0.05 ($p\text{-value} = -0.216$). Therefore, hypothesis H6 is rejected because there is no significant negative relationship between gender and school behavior. The result is a null hypothesis.

Table 4: The T-Test value for the relationship between gender and school behavior.

Age	Group Statistics			Independent Sample T-Test	
	Number	Mean	Standard Deviation	t	Sig.
Male	62	20.87	5.28	-0.05	-0.216
Female	44	20.93	6.07		

4.4 The Importance of Family

H1: There is a positive relationship between age and the importance of family.

The data in Table 5 conclude that there is no significant positive relationship between age and the importance of family. The outcome of the data for the gender differences of under 18 Age ($M = 40.00$, $SD = 0$), 19-21 years of age ($M = 35.52$, $SD = 4.75$), Age 22 - 24 ($M = 34.80$, $SD = 5.40$), above 25 Age ($M = 34.73$, $SD = 4.35$) in the perspective of family importance, with the results of, $p = 0.695$. The outcome shows that the age range of 19 - 21 with a population of 34 people has a moderate level of effects on personality development by the importance of family. The results rejected the hypothesis of H1 because the p-value being more than 0.05 ($p\text{-value} = 0.695$). Therefore, Hypothesis H1 is rejected because there is no significant positive relationship between age and the importance of the family. The result is a null hypothesis.

Table 5: The ANOVA values the relationship between age and importance of family.

Age	Group Statistics			ANOVA	
	Number	Mean	Standard Deviation	F	Sig.
Below 18 Age	1	40.00	-	0.483	0.695
Age 19 - 21	34	35.52	4.75		
Age 22 - 24	56	34.80	5.40		
Above 25 Age	15	34.73	4.35		

H5: There is a positive relationship between gender and the importance of family.

The data in Table 6 conclude that there is a significant positive relationship between sex and importance of family. The data result for the gender differences of male ($M = 34.50$, $SD = 5.80$) and female ($M = 35.88$, $SD = 3.56$) in the perspective of the importance of family, with the results of, $p = -0.02$. The outcome shows that the mean score of the gender differences that the female has is slightly higher than the male ($M = 35.88$ vs 34.50). The outcome suggests that both genders which is male and female, have similar effects on personality development by the importance of family. The results accepted the hypothesis of H5 because the p-value being less than 0.05 ($p\text{-value} = -0.02$). Therefore, Hypothesis H5 is accepted.

Table 6: The T-Test value for the relationship between gender and importance of family.

Age	Group Statistics			Independent Sample T-Test	
	Number	Mean	Standard Deviation	t	Sig.
Male	62	34.50	5.80	-1.40	-0.029
Female	44	35.88	3.56		

4.5 Internet Motives

H3: There is a positive relationship between age and the motives of the Internet.

The data in Table 7 conclude that there is no significant positive relationship between age and the motives of the Internet. The results of the data for the age range are Below 18 years of age (M = 100.00, SD=0), Age 19 - 21(M = 84.32, SD = 13.16), 22-24 years of age (M = 82.42, SD = 12.49), above 25 Age(M = 80.73, SD = 13.11) from the perspective of motives of the Internet, with the results of, $p = 0.443$. The outcome shows that the age range of 19 - 21 with a population of 34 persons holds a moderate level of effects on personality development by the motives of the Internet. The results supported the null hypothesis because the p-value was greater than 0.05 ($p\text{-value} = 0.443$). Hence, hypothesis H3 is rejected because there is no significant positive relationship between age and motives of the Internet.

Table 7: The ANOVA value for the relationship between age and Motives of Internet.

Age	Group Statistics			ANOVA	
	Number	Mean	Standard Deviation	F	Sig.
Below 18 Age	1	100.00	-	0.903	0.443
Age 19 - 21	34	84.32	13.16		
Age 22 - 24	56	82.42	12.49		
Above 25 Age	15	80.73	13.11		

H3a: There is a positive relationship between age and motivations of the internet in interpersonal communication.

The data in Table 8 conclude that there is no significant positive relationship between age and the motives of the Internet on interpersonal communication. The data results for the age range are Below 18 Years (M = 40.00, SD=0), Age 19 - 21 Years (M = 34.05, SD = 5.65), Age 22 - 24 Years (M = 33.94, SD = 5.79), Above 25 Years (M = 33.73, SD = 4.87) from the perspective of motives of the Internet in interpersonal communication, with the results of, $p = 0.759$. The outcome shows that the mean of the age range of 19 - 21 with a population of 34 persons holds a moderate level of effects on personality development by the motives of the Internet. The results supported the null hypothesis due to the p-value being greater than 0.05 ($p\text{-value} = 0.759$). Hence, hypothesis H3a is rejected because there is no significant positive relationship between age and Internet on interpersonal communication.

Table 8: The ANOVA value for the relationship between age and Motives of Internet - Interpersonal Communication Move.

Age	Group Statistics			ANOVA	
	Number	Mean	Standard Deviation	F	Sig.
Below 18 Age	1	40.00	-	0.392	0.759
Age 19 - 21	34	34.05	5.65		
Age 22 - 24	56	33.94	5.79		
Above 25 Age	15	33.73	4.87		

H3b: There is a positive relationship between age and motives of the internet on Entertainment.

The data in Table 9 conclude that there is no significant positive relationship between age and the motives of the Internet on entertainment. The data results for the age range are Below 18 Years (M = 35.00, SD=0), Age 19 - 21 Years (M = 29.05, SD = 5.52), Age 22 - 24 Years (M = 27.17, SD = 5.68), Above 25 Years (M = 26.33, SD = 6.32) from the perspective of motives of the internet in

entertainment, with the results of, $p = 0.203$. The outcome shows that the mean of the age range of 19 - 21 with a population of 34 persons has a moderate level of effects on personality development by the motives of the internet on entertainment. The results supported the null hypothesis because the p-value was greater than 0.05 ($p\text{-value} = 0.203$). Therefore, hypothesis H3b is rejected because there is no significant positive relationship between age and Internet on entertainment.

Table 9: The ANOVA value for the relationship between age and Motives of Internet – Entertainment.

Age	Group Statistics			ANOVA	
	Number	Mean	Standard Deviation	F	Sig.
Below 18 Age	1	35.00	-	1.564	0.203
Age 19 - 21	34	29.05	5.52		
Age 22 - 24	56	27.17	5.68		
Above 25 Age	15	26.33	6.32		

H3c: There is a positive relationship between age and motives of the Internet on Information.

The data in Table 10 conclude that there is no significant positive relationship between age and the motives of the Internet on information. The data results for the age range are Below 18 Age ($M = 25.00$, $SD = 0$), Age 19 - 21 ($M = 21.26$, $SD = 3.32$), Age 22 - 24 ($M = 21.30$, $SD = 3.29$), Above 25 Age ($M = 20.66$, $SD = 3.61$) from the perspective of motives of the internet on information, with the results of, $p = 0.634$. The outcome shows that the age range of 19 - 21 with a population of 34 persons holds a moderate level of effects on personality development by the motives of the Internet on information. The results supported the null hypothesis due to the p-value being greater than 0.05 ($p\text{-value} = 0.634$). Hence, the hypothesis H3c is rejected because there is no significant positive relationship between age and the motives of the Internet on information.

Table 10: The ANOVA value for the relationship between age and Motives of Internet – Information.

Age	Group Statistics			ANOVA	
	Number	Mean	Standard Deviation	F	Sig.
Below 18 Age	1	25.00	-	0.573	0.634
Age 19 - 21	34	21.26	3.32		
Age 22 - 24	56	21.30	3.29		
Above 25 Age	15	20.66	3.61		

H7: There is a positive relationship between gender and the motives of the Internet.

The data in Table 11 concludes that there is no significant positive relationship between gender and the motives of the Internet. The results of the data for the gender differences between men ($M = 82.91$, $SD = 12.04$) and women ($M = 83.02$, $SD = 13.89$) in the perspective of the motives of the internet, with the results of, $p = 0.363$. The outcome shows that the mean score of the gender differences that the female has is slightly higher than the male ($M = 82.91$ vs. 83.02). The outcome suggests that the two genders, which is male and female, have similar effects on personality development by the motives of the Internet. The results rejected the H7 hypothesis because the p-value was greater than 0.05 ($p\text{-value} = 0.363$). Therefore, hypothesis H7 is rejected because there is no significant positive relationship between gender and the motives of the Internet. The result is a null hypothesis.

Table 11: The T-Test value for relationship between the gender and Motives of Internet.

Age	Group Statistics			Independent Sample T-Test	
	Number	Mean	Standard Deviation	t	Sig.
Male	62	82.91	12.04	-0.41	0.363
Female	44	83.02	13.89		

H7a: There is a positive relationship between gender and the motives of the Internet in interpersonal communication.

The data in Table 12 conclude that there is no significant positive relationship between gender and the motives of the Internet on interpersonal communication. The data result for the gender differences of male ($M = 33.70$, $SD = 5.38$) and female ($M = 34.34$, $SD = 5.90$) in the perspective of the motives of the Internet in interpersonal communication, with the results of, $p = 0.705$. The outcome shows that the mean score of the gender differences that the female has is slightly higher than the male ($M = 33.77$ vs 34.34). The outcome suggests that both genders, which is male and female, have similar effects on personality development by the motives of the Internet on interpersonal communication. The results rejected the hypothesis of H7a due to the p-value being more than 0.05 (p -value = 0.705). Therefore, the hypothesis H7a is rejected because there is no significant positive relationship between gender and motives of the Internet on interpersonal communication. The result is a null hypothesis.

Table 12: The T-Test Value for relationship between Gender and Motives Of Internet - Interpersonal Communication Move.

Age	Group Statistics			Independent Sample T-Test	
	Number	Mean	Standard Deviation	t	Sig.
Male	62	33.77	5.38	-0.0513	0.705
Female	44	34.34	5.90		

H7b: There is a positive relationship between gender and the motives of the Internet for entertainment.

The data in Table 13 conclude that there is no significant positive relationship between gender and the interests of the Internet on entertainment. The data result for the gender differences of male ($M = 27.72$, $SD = 5.79$) and female ($M = 27.70$, $SD = 5.81$) in the perspective of the internet on entertainment, with the results of $p = 0.826$. The outcome shows that the mean score of gender differences between women is slightly lower than male ($M = 27.72$ vs 27.70). The outcome suggests that the two genders, which is male and female, have similar effects on personality development by the motives of the Internet. The results rejected the H7b hypothesis because the p-value was greater than 0.05 (p -value = 0.826). Therefore, hypothesis H7b is rejected because there is no significant positive relationship between gender and the motives of the Internet on entertainment. The result is a null hypothesis.

Table 13: The T-Test value for the relationship between gender and Motives of Internet – entertainment.

Age	Group Statistics			Independent Sample T-Test	
	Number	Mean	Standard Deviation	t	Sig.
Male	62	27.72	5.79	0.019	0.826
Female	44	27.70	5.81		

H7c: There is a positive relationship between gender and the motives of the Internet on information.

The data in Table 14 conclude that there is no significant positive relationship between gender and the the motives of the Internet on information. The data result for the gender differences of male ($M = 21.41$, $SD = 3.23$) and female ($M = 20.97$, $SD = 3.48$) in the perspective of the motives of the Internet on information, with the results of, $p = 0.413$. The outcome shows that the mean score of the gender differences between women is slightly lower than male ($M = 21.41$ vs. 20.97). The outcome suggests that both genders, which is male and female, have similar effects on personality development by the motives of the Internet on information. The results rejected the hypothesis of H7c due to the p-value being more than 0.05 (p -value = 0.413). Therefore, the hypothesis H7c is rejected because there is no significant positive relationship between gender and motives of the Internet on information. The result is a null hypothesis.

Table 14: The T-Test Value for the relationship between the Gender and Motives of Internet - Information.

Age	Group Statistics			Independent Sample T-Test	
	Number	Mean	Standard Deviation	t	Sig.
Male	62	21.41	3.23	0.671	0.413
Female	44	20.97	3.48		

4.6 Emotional Problem

H4: There is a negative relationship between age and emotional problems.

The data in Table 15 concludes that there is no positive relationship between age and emotional problems. The data outcome for the age range are Below 18 years (M = 35.00, SD=0), Age 19 - 21 (M = 27.47, SD = 5.83), Age 22 - 24 (M = 25.75, SD = 7.41), Above 25 years (M = 24.33, SD = 6.97) in the perspective of emotional problems, with the results of $p = 0.253$. The outcome shows that the mean of the age range of 19 - 21 with a population of 34 persons has a moderate level of effects on personality development by emotional problems. The results supported the null hypothesis because the p-value was greater than 0.05 (p-value = 0.253). Hence, hypothesis H4 is rejected.

Table 15: The ANOVA value for the relationship between age and emotional problems.

Age	Group Statistics			ANOVA	
	Number	Mean	Standard Deviation	F	Sig.
Below 18 Age	1	35.00	-	1.380	0.253
Age 19 - 21	34	27.47	5.83		
Age 22 - 24	56	25.75	7.41		
Above 25 Age	15	24.33	6.97		

H8: There is a negative relationship between gender and emotional problems.

The data in Table 16 conclude that there is no significant positive relationship between gender and emotional problems. The data result for the gender differences of male (M = 26.85, SD = 6.49) and female (M = 25.25, SD = 7.44) in the perspective of emotional problems, with the results of, $p = 0.29$. The outcome shows that the mean score of the gender differences between women is slightly lower than male (M = 26.85 vs. 25.25). The outcome suggests that both genders, which is male and female, have similar effects on personality development by emotional problems. The results rejected the hypothesis of H8 because the p-value being more than 0.05 (p-value = 0.290). Therefore, hypothesis H8 is rejected because there is no significant positive relationship between gender and emotional problems. The result is a null hypothesis.

Table 16: The value for relationship between gender and emotional problems.

Age	Group Statistics			Independent Sample T-Test	
	Number	Mean	Standard Deviation	t	Sig.
Male	62	26.85	6.49	1.179	0.290
Female	44	25.25	7.44		

4.7 Bivariate Correlation

Based on Table 17, the results show the Pearson Correlation for the independent variable and dependent variable. The results based on Pearson's correlation indicate that the significant level for the dependent variable, Personality Development, is $p < 0.01$ and $p < 0.001$. The list of independent variables was school behavior with significant value of ($p < 0.001$), Importance of Family with a significant value of ($P < 0.001$), Motives of Internet motivations with a significant value of ($p < 0.01$), and Emotional problems with significant value of ($p < 0.001$). The hypothesis of H9, H10, H11, H12 are accepted in the study.

Table 17: Bivariate Correlation analysis for adolescent personality development

Independent Variables	Personality Development
School behavior	0.504***
Importance of Family	0.425***
Motives of the Internet	0.574**
Emotional Problems	0.563***

Note: *** $p < 0.001$; ** $p < 0.01$

4.8 Mediating Analysis

Based on Table 18 that concludes the mediation effect of the relationship of the variables with the hypothesis statement. The table shows the direct effect (DE) and Indirect Effect (IE) with 95% confidence interval for analyzing with the mediating analysis of covariate factors and the predictors and dependent variables. Throughout the research analysis with the mediating analysis, the mediator factors of the covariates factors are found to be a moderate significant mediator relationship based on the predictors and the mediator relationship were, age and School Behavior (IE = -.8625), with a significant value of ($p < 0.01$), Age and importance of family (IE = -.6309), with significant value of ($p < 0.01$), Age and Motives Of Internet (IE = -1.2584), with significant value of ($p < 0.01$) and Gender and Importance Of Family (IE = 1.5649). Therefore, the hypotheses H13, H14, H16 and H18 are accepted.

Table 18: Direct and indirect effects on mediating analysis.

Predictor	Mediator	DV	DE (LLCI, ULCI)	IE (BootLLCI, BootULCI)
Age	SB	Personality Development	-3.6786**(-6.7042, -.6530)	-.8265**(-2.4544, .6851)
	IOF		-3.8742**(-7.0425, -.7060)	-.6309**(-1.9843, .7747)
	MOI		-3.2467**(-6.1375, -.3559)	-1.2584**(-3.1517, .7344)
	EP		-2.7382(-5.7036, .2271)	-1.7669(.0177, -6.7042)
Gender	SB	Personality Development	-3.8077(-8.0080, .3925)	.0687(-2.6495, 2.4562)
	IOF		-5.3039**(-9.6969, -.9109)	1.5649**(-.3792, 3.4951)
	MOI		-3.7971(-7.7739, .1797)	.0581(-2.7135, 3.0904)
	EP		-2.1339(-6.2233, 1.9555)	-1.6051(-4.1355, 1.1572)

Note: DV = dependent variable; DE=Direct Effect; IE=Indirect Effect; ** $p < 0.01$

5.0 DISCUSSION

5.1 School Behavior

The results accepted the statement of a hypothesis of the negative relationship between school behavior and adolescence personality. Based on the proven article statement that adolescents get influenced by negative activities could lead to a negative behavior of adolescents [10]. Research indicated that exposure to the negative school environment for adolescents would lead to negative influences on adolescents' personalities. The hypothesis statement of both age and gender has a negative relationship with school behavior which is rejected. Based on the results of value, there is no significant negative relationship towards the statement with the results shown in Tables 3 and 4. This research may indicate that gender and age have a minimal covariate effect towards school behavior during the growth of adolescents. The hypothesis of a negative mediating effect of school behavior in the relationship between age and adolescence personality is accepted. Based on Table 18, we conclude with significant results supporting the statement which shapes the adolescent's self-identity and personal worth during their growth [10]. Research indicates that different age ranges of adolescents that live in different environments of school areas with negative events or experiences like social or happening toward them throughout their livelihood could lead to increased anxiety and loneliness, which can influence their negative personality development [11].

5.2 Importance of Family

First, there is a positive relationship between sex and the importance of family. Based on Table 5, the results show that the factors such as gender contribute to the variability in personality outcomes [12]. Research indicates that family environmental factors play an important role in shaping personality traits, siblings within the same family often exhibit notable differences [12,50]. The different modes of genders have different education to educate and shape adolescents. Based on Table 17, the correlation of factor effect between the importance of family and adolescence personality development has a positive relationship and was accepted in the study. This means the importance of family has a connection between them. With this accepted correlation or relationship, it shows that the family is a very important factor that can shape the development of an individual's personality [13] This is because family is a character that stays most closely with adolescents and adolescents are keen observers, absorbing every detail. They are constantly attentive to their parents, learning both positive and negative behaviors through careful observation, listening, and imitation. Furthermore, the mediation analysis of the present study shows that there is a positive mediating effect of the importance of family in the relationship between gender and the personality of adolescents. Based on Table 18, this result confirmed that the mediating role of family importance highlights the importance of familial relationships in shaping adolescent personality. By fostering supportive family environments, we can create opportunities for adolescents to develop healthy and adaptive personality traits, regardless of gender. Also, according to Table 18, research suggests that the importance of family serves as a positive mediator in the relationship between age and adolescent personality. Although age may initially influence personality development, support and cohesion within the family environment can significantly shape adolescents' personality traits over time. Understanding this mediating effect underscores the crucial role of family dynamics in the development of adolescents. By fostering supportive family environments, we can promote positive personality outcomes for adolescents across different age groups [19, 49].

5.3 Motives for the Internet

Based on Tables 7 & 11, the result shows that the hypothesis of a positive relationship between age and motives of the Internet or between gender and motives of the internet is rejected because the p-value being more than 0.05. The lack of significant relationships suggests the need to explore other factors that might influence the motives of Internet use, such as personal interests, cultural influences, or socioeconomic status [45]. The study's limitation lies in its reliance on self-reported data, potentially introducing biases. Future research could use observational studies or interviews to provide more objective information on adolescents' use of the Internet and personality development, enhancing the reliability and validity of the findings. Other than that, the result of Table 17 shows that the hypothesis of a positive relationship between the motives of the Internet and adolescence personality in adolescents is accepted with a significant value of p less than 0.001. This suggests that internet use, such as social interaction, information seeking, or entertainment, can significantly shape adolescents' personality traits. As a result, it highlights the importance of understanding the specific ways adolescents engage with the Internet to better support healthy personality development during this crucial life stage [46]. Policies and interventions could be tailored to guide adolescents toward more positive and constructive internet use of the Internet to promote beneficial personality growth [47, 48].

5.4 Emotional Problems

Based on Table 15, the result shows that the hypothesis of a negative relationship between age and emotional problems is rejected because the p-value is greater than 0.05. Research indicates that emotional problems in adolescence can significantly impact personality development [32]. Current psychological research shows that emotion is relatively unaffected by aging or even improves with age, in contrast to most cognitive functions [40]. For example, aging is associated with improved emotional problem solving [41] and an increased frequency of positive feelings [42]. However, other emotional capacities, such as the ability to recognize others' emotions, decline with age [43]. Based on Table 16, this result rejected the hypothesis that gender influences emotional problems. Each

gender has its own unique problems that it will face. Research has shown small but significant gender differences in emotion expression, with women showing greater emotion expression overall and for positive emotions and internalizing negative emotions such as sadness and anxiety, but with men expressing greater levels of aggression and anger than women [44,50].

5.0 CONCLUSION

In conclusion, this research provides valuable insights into the factors that affect personality development among adolescents aged 18 to 25 years. Using a questionnaire-based methodology, we were able to analyze the impact of environmental, social, and external factors on personality traits, with a particular focus on the role of gender. Additionally, our research examined how school behavior, family importance, motives for internet use, and emotional problems contribute to shaping adolescents' personalities. The results of our study indicate that a combination of these factors plays a significant role in the development of personality during adolescence. For example, positive family interactions and supportive school environments can contribute to healthier personality development, while excessive use or unresolved emotional problems can lead to challenges.

The limitation of our study is the reliance on self-reported data from questionnaires, which may introduce bias or inaccuracies. Furthermore, our study focuses on a specific age range and may not fully capture the experiences of younger or older adolescents. Future research could benefit from a more extensive age range and a combination of qualitative and quantitative data collection methods to validate and expand upon our findings. In the future, research could focus on finding ways to reduce negative influences on adolescent personality development and improve supportive environments. Long-term studies could provide more insight into how these factors impact personality over time. Looking at other aspects, such as cultural differences and economic situations, could also give us a better understanding of the many factors involved in the development of the personality of adolescents.

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