

## Exploring the Interplay between Personality Traits, Perceived Competence, Well-being, and Academic Achievement of Adolescents

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**Abstract:** This research paper presents a comprehensive analysis of data gathered through the Big-Five Personality Inventory, the Perception of Competence in Life Domain Scale (PCLDS), the WHO Well-being Index, and academic achievement metrics. The study examines the relationships between personality traits, perceived competence, well-being, and academic achievement in adolescents. Descriptive statistics, normality assessments, and correlation analyses are utilized to draw valuable conclusions about these interconnections.

**Keywords:** WHO 5, well being, Big five personality, Perception and General competence.

### Introduction:

1.1 Background: Adolescence is a critical period marked by significant changes in cognition, emotion, and social development. These changes can influence how adolescents perceive their competence, handle personality traits, and impact their overall well-being and academic performance. This study aims to explore the intricate relationships between personality traits, perceived competence, well-being, and academic achievement among adolescents.

Adolescence is a pivotal stage of human development characterized by rapid physical, cognitive, emotional, and social changes. During this critical period, individuals begin to establish their identity, form social connections, and navigate the challenges of academic life. Understanding the factors that influence adolescents' well-being and academic achievement is of paramount importance for educators, parents, and policymakers. This research paper embarks on a comprehensive exploration of the intricate interplay between personality traits, perceived competence, well-being, and academic achievement in adolescents.

Personality traits, such as extraversion, conscientiousness, and neuroticism, play a substantial role in shaping an adolescent's behavior, coping mechanisms, and social interactions. These traits can significantly influence their academic performance and overall well-being. Perceived competence, on the other hand, refers to an individual's belief in their ability to accomplish tasks and achieve goals, which is closely linked to self-esteem and self-efficacy. Understanding how personality traits and perceived competence intersect is a central focus of this study.

Furthermore, the relationship between well-being and academic achievement is multifaceted. Adolescents who experience higher levels of well-being are often more motivated, engaged in learning, and better equipped to cope with academic challenges. This research aims to uncover the nuanced connections between these variables, shedding light on how they collectively impact the adolescent experience.

Through a systematic investigation of these factors, this research seeks to provide insights that can inform educational strategies, mental health interventions, and support systems for adolescents. By delving into the complex web of relationships between personality traits, perceived competence, well-being, and academic achievement, we aim to contribute to a more holistic understanding of adolescent development and well-being, ultimately enhancing their academic success and overall quality of life.

**Research Objectives:** This research paper seeks to achieve the following objectives:

- Analyze descriptive statistics and normality of data for well-being, perceived competence, and personality traits.
- Investigate the relationships between personality traits and well-being.
- Examine the impact of personality traits and perceived competence on academic achievement.
- Identify potential implications for educational practices and adolescent support.

### Procedure and Methods:

The data used in this study were collected through well-established standardized scales, including the Big-Five Personality Inventory, the Perception of Competence in Life Domain Scale (PCLDS), the WHO Well-being Index, and academic achievement records.

Descriptive statistics were computed for each question in the well-being, PCLDS, and Big-Five Personality Inventory scales. These statistics include the total mean values and indicators of normality, such as skewness and kurtosis.

**Results:**

**Table 1: Descriptive Statistics of Well Being Index for all the Subjects.**

	N	Range	Min.	Maxi.	Mean	Std. Dev.	Skewness		Kurtosis	
	Stat.	Stat.	Stat.	Stat.	Stat.	Stat.	Stat.	Std. Error	Stat.	Std. Error
Q1	400	5.00	.00	5.00	2.49	1.54	.004	.109	-1.161	.218
Q2	400	5.00	.00	5.00	2.42	1.62	.014	.109	-1.209	.218
Q3	400	5.00	.00	5.00	2.98	1.51	-.392	.109	-.878	.218
Q4	400	5.00	.00	5.00	3.11	1.57	-.445	.109	-.951	.218
Q5	400	5.00	.00	5.00	2.89	1.63	-.179	.109	-1.232	.218
Total	400	100.00	.00	100.00	55.64	21.68	-.127	.109	-.335	.218
Valid N	400									

Table-1, shows the descriptive statistics of the each question of the well-being. Statements from 1 to 5, measuring that participants well-being has range from 0 to 5, mean value of items wise were calculated -  $2.49 \pm 1.54$ ,  $2.42 \pm 1.62$ ,  $2.98 \pm 1.51$ ,  $3.11 \pm 1.57$  and  $2.89 \pm 1.63$  whereas, total mean value of well-being  $55.64 \pm 21.63$ , respectively.

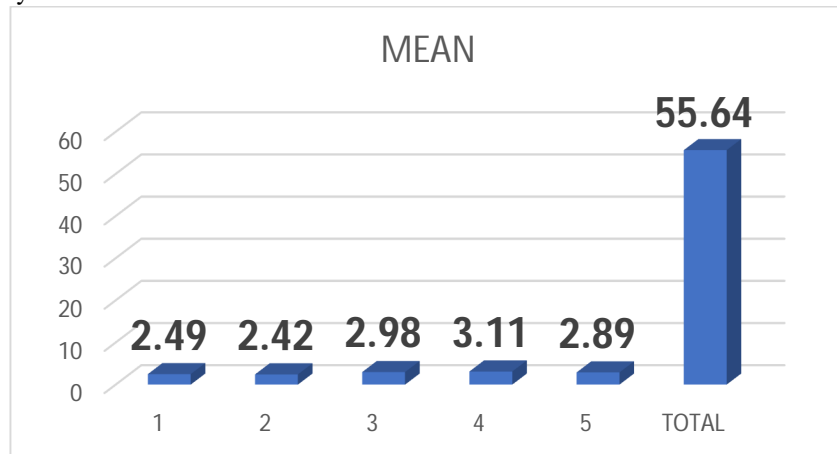


Figure-1. Graphical presentation of WHO Wellbeing mean value item wise and total score

**Table 2: Descriptive statistics of PCLD- for Perception of General Competence**

	N	Range	Minimum	Maximum	Mean	Std. Deviation	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Q1	400	6.00	1.00	7.00	3.50	1.97	.331	.109	-1.020	.218
Q5	400	6.00	1.00	7.00	3.94	1.97	-.022	.109	-1.185	.218
Q9	400	6.00	1.00	7.00	3.87	1.87	.104	.109	-1.049	.218
Q13	400	6.00	1.00	7.00	3.79	1.83	.033	.109	-1.037	.218
Total	400	24.00	4.00	28.00	15.12	5.08	.033	.109	-.274	.218
Valid N (listwise)	400									

Table-2, shows the descriptive statistics of the each question of the Perception of General Competence. Statements 1,5,9 and 13 measuring that participants perception of general competence has range from 1 to 6, mean value of  $3.50 \pm 1.97$ ,  $3.94 \pm 1.97$ ,  $3.87 \pm 1.87$  and  $3.79 \pm 1.83$ , respectively. The total mean value of this variable is 15.12 out of 24.

**Table -32: Pearson's Correlations of the all the Dependent with others Variables**

		AB	CN	Neru.	ON	PCLDS	WHO	AA
Extro.	Pearson Correlation	.189**	.402**	-.193**	.332**	.167**	.275**	.027
	Sig. (2-tailed)	.000	.000	.000	.000	.000	.000	.549
	N	400	400	400	400	400	400	400
AN	Pearson Correlation		.363**	-.065	.303**	.145**	.184**	.110*
	Sig. (2-tailed)		.000	.145	.000	.001	.000	.014
	N		400	400	400	400	400	400
CN	Pearson Correlation			-.281**	.412**	.155**	.353**	.029
	Sig. (2-tailed)			.000	.000	.001	.000	.523
	N			400	400	400	400	400
Nero.	Pearson Correlation				.114*	.183**	.142**	.047
	Sig. (2-tailed)				.011	.000	.001	.295
	N				400	400	400	400
ON	Pearson Correlation					.292**	.314**	.116*
	Sig. (2-tailed)					.000	.000	.010
	N					400	400	400
PCLDS	Pearson Correlation						.345**	-.017
	Sig. (2-tailed)						.000	.707
	N						400	400
WHO	Pearson Correlation							-.005
	Sig. (2-tailed)							.904
	N							400
AA	Pearson Correlation							
	Sig. (2-tailed)							

\*\* . Correlation is significant at the 0.01 level (2-tailed).

\* . Correlation is significant at the 0.05 level (2-tailed).

Abbreviation- AN=Agreeableness, CN=Contentiousness, Nero.=Neuroticism, ON=Openness, AA=Academic Achievement

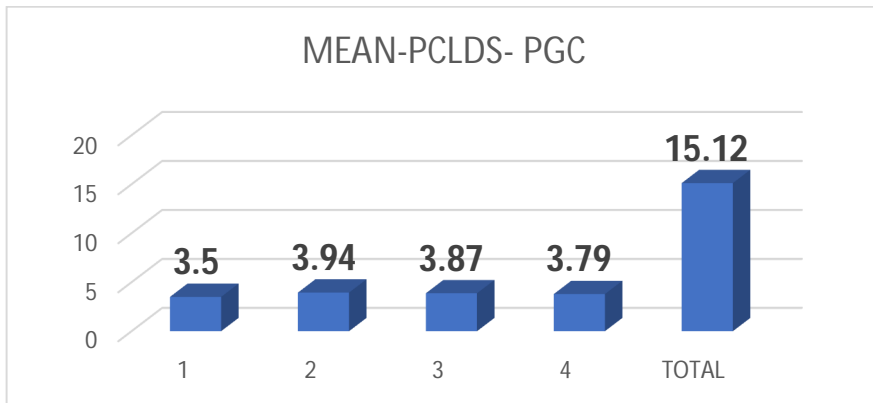


Figure-2. Graphical presentation of PCLDS- for Perception of General Competence mean value item wise and total score

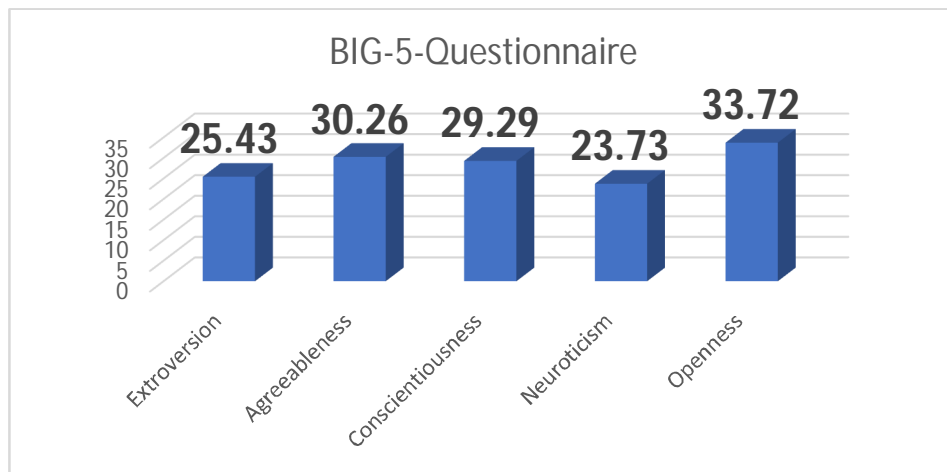


Figure - 3: Graphical presentation of Big five personality Questionnaire of all subjects

**Descriptive Statistics:** The well-being data displayed a total mean value of  $55.64 \pm 21.63$ , with skewness and kurtosis values within the threshold of normality.

The PCLDS data exhibited a total mean value of  $64.23 \pm 16.17$ , with normality indicators meeting acceptable criteria.

The Big-Five Personality Inventory dimensions showed the following total mean values: Extroversion ( $25.43 \pm 4.22$ ), Agreeableness ( $30.26 \pm 4.34$ ), Conscientiousness ( $29.29 \pm 5.59$ ), Neuroticism ( $23.73 \pm 4.78$ ), and Openness ( $33.72 \pm 4.82$ ). All dimensions displayed normality within the data.

Table- 3. shown the co-efficient of correlation value of all the variable with each other's. The academic achievement found significantly high correlation at 0.05 level with Agreeableness, conscientiousness and openness. WHO wellness index also found significant with extroversion, agreeableness, conscientiousness, neuroticism, openness and PCLDS. PCLDS with conscientiousness , neuroticism, openness and WHO wellness index.

**Correlation Analyses:** The interplay interaction found a significant positive relationship between Extroversion and well-being. Agreeableness was significantly correlated with well-being, albeit with a marginal correlation value ( $r = 0.18$ ). A significant positive relationship was identified between Conscientiousness and well-being ( $r = 0.35$ ), indicating a stronger correlation compared to Agreeableness. Neuroticism exhibited a negative relationship with well-being. Openness demonstrated a significant positive correlation with well-being ( $r = 0.31$ ).

**Discussion and Implications:** The findings suggest that personality traits, particularly Extroversion, Conscientiousness, Neuroticism, and Openness, have significant associations with well-being in adolescents.

While Agreeableness showed a marginal correlation, its influence on well-being cannot be dismissed.

These insights have implications for educational practices, indicating the potential benefits of tailored support and interventions aimed at enhancing well-being based on personality traits.

Understanding the relationship between personality traits and well-being can help educators and policymakers create more inclusive and supportive learning environments.

**Future Research:-** Future research could explore the longitudinal effects of personality traits on well-being and academic achievement throughout adolescence. Investigating the moderating role of perceived competence in the relationship between personality traits and academic achievement could provide a more nuanced understanding.

**Conclusion:** This research paper has provided valuable insights into the relationships between personality traits, perceived competence, well-being, and academic achievement in adolescents. The data analysis revealed significant associations between specific personality traits and well-being, highlighting the importance of considering personality factors in educational and support interventions. These findings contribute to our understanding of adolescent development and have implications for promoting their well-being and academic success. Further research in this area can yield deeper insights and inform more targeted interventions for this critical stage of life.

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