

	<p>Science, Education and Innovations in the Context of Modern Problems Issue 2, Vol. 9, 2026</p> <p>RESEARCH ARTICLE </p> <h2>Character strengths as predictor variables for well-being and psychological adjustment</h2>	
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<p>Abstract Character strengths serve as fundamental pillars in the construction of positive personality. Activating and developing these strengths elevates Well-Being and achieves higher levels of Psychological Adjustment, as affirmed by the findings of various international studies. This study, an extension of such research, was conducted on a sample of (60) secondary school students. The aim was to identify Character Strengths believed to contribute to enhancing Well-Being and fostering Psychological Adjustment. Results indicate a significant impact of Character Strengths on both Well-Being and Psychological Adjustment. Components such as the strength of Love Bestowal, the strength of Modesty, and the strength of Gratitude were found to predict Well-Being. Meanwhile, the strength of Authenticity was predictive of Psychological Adjustment. Regarding the nature of the relationship between Well-Being and Psychological Adjustment, the results revealed a strong positive correlation between the two variables. These findings underscore that activating and cultivating Character Strengths contributes to raising levels of Well-Being, positively influencing Psychological Adjustment. This suggests that individuals experience a more satisfying and joyful life, contributing to a more flourishing existence.</p>		
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1. Introduction

Over the past decades, psychologists have shifted their focus towards studying positive psychological phenomena such as resilience, gratitude, and virtuous emotional aspects like tolerance and forgiveness. This shift emphasizes the departure from traditional assumptions related to understanding and treating psychological issues, including poor psychological adjustment. Many of these studies have delved into the exploration of the nature of good or virtuous character, a topic that was a major concern for philosophers, religious figures, and educators, according to Park (2004), this landscape is evolving under the influence of positive psychology research. Seligman (2002) elucidated that the good life can be developed and nurtured by inventorying and identifying Character Strengths and enhancing them. This approach, focusing on building strengths and promoting well-being, as opposed to solely addressing weaknesses and repairing deficits (as cited in Park, 2004, p.41), has been emphasized in the second wave of positive psychology research. It has emphasized the effectiveness of positive psychology interventions related to helping individuals develop character strengths that play a preventive role for those living in a good state of psychological adjustment. It also supports and helps those with life difficulties and problems by reactivating and developing their compatibility strategies. This may strengthen psychological empowerment mechanisms and maximize the signs of personal immunization positive psychology doctrine is based on the fact that character strengths contribute to the individual's happiness and well-being. What may be positively reflected in the state of psychological adjustment that is one of the aspects of mental health (Bachene, in press).

Well-Being is one of the most researched topics in positive psychology, and its levels can indicate the state of Psychological Adjustment. Castro (2009) argued that Psychological Adjustment "includes a positive sense of identity, life satisfaction, psychological well-being, and good mental health." There is evidence that Character Strengths have a positive connection to a wide range of successful Psychological Adjustment outcomes. Consequently, within the scope of these studies, it becomes evident that Psychological Adjustment may be related to Character Strengths, supported by studies such as Karris (2007) and Lounsbury, Fisher, Levy, and Welsh (2009). Therefore, focusing on character strengths is an emphasis on how these Strengths can assist individuals in overcoming a wide array of challenges and achieving positive outcomes within the concept of Psychological Adjustment, as noted in studies like Lounsbury, Fisher, Levy, and Welsh (2009) (as cited in Xie, 2015, pp. 4-9).

Despite these advancements, there is limited research on this topic concerning students. Educational institutions, being ideal settings for studying Character Strengths, prominently manifest in the Well-Being of students. Moreover, they play a crucial role in enhancing motivation for achievement, as indicated by the results of several studies. Consequently, researchers have established a connection between Character Strengths and the ability to face challenges, where Psychological Adjustment stands as one of its crucial indicators.

Therefore, studying the emergence, growth, and development of Character Strengths in individuals can contribute to enhancing our understanding of how these strengths help individuals navigate their life experiences, confront challenges, and overcome psychological problems that may hinder their Psychological Adjustment. This understanding can facilitate the development of intervention mechanisms that promote Well-Being and improve levels of Happiness, considering these as crucial indicators reflecting Psychological Adjustment.

Thus, through this research, we seek to highlight the importance of developing and enhancing Character Strengths, considering that positive psychology emphasizes that personal strengths contribute to individual Well-Being and Happiness. This, in turn, may positively impact the state of Psychological Adjustment. Character Strengths are psychological components that help individuals live a more flourishing and satisfying life, prompting us to consider their contribution to enhancing Psychological Adjustment in general Building upon this.

2. Literature Review

2.1 Defining Character Strengths

Character strengths represent a multidimensional concept encompassing internal determinants that distinguish an individual. These strengths manifest as a set of positive traits reflected in thoughts, emotions, and behaviors, rooted in the interactive integration of biological and psychological nature and external factors like stable social environments and good education. Activating and developing character strengths works to enhance levels of happiness, well-being, and improve performance quality (Bachene, 2020, p. 98). Researchers like Renshaw and colleagues (2014) have shown increasing interest, recognizing positive psychological traits as contributors to the development and Well-Being of youth (as cited in Arslan, 2019a, p. 1449). These positive traits, known as Character Strengths, can influence an individual's thoughts, feelings, and behaviors. Character strengths are classified into 24 strengths within six categories called Virtues, found universally across cultures and historical periods, giving them a global significance.

Character strengths and human virtues hold significant importance in an individual's life, being linked to the overall well-being of society, as indicated by the results of studies by Peterson, Park, and Seligman (2008). The focus on positive psychological traits extends beyond addressing problems and deficiencies, with the classification project of character strengths and virtues illustrating the hypothesis of positive psychology, emphasizing the importance of good personality traits that make life worth living (as cited in Park & Peterson, 2009, p. 8). Within this context, the results of Park and others (2004) indicated that Character Strengths are a potential starting point for enhancing individual Well-Being in general (as cited in Hausler & al, 2017b, p.1). These Strengths are considered compounds for Well-

Being (Lai & al, 2018, p.2). Given this importance, educational and pedagogical institutions can build virtues by adopting curricula that promote and develop character strengths. Benninga and colleagues (2006) suggest that students' experiences within the academic framework can build character, and good schools promote positive social relationships, reinforcing models of justice, fairness, care, and respect. This proposition acknowledges the substantial and impactful role schools play, emphasizing the necessity for serious and dedicated investment in educational goals. This includes adopting curricula founded on scientifically grounded best practices, particularly those that focus on exploring and developing positive traits, character strengths, virtues, and overall well-being. Such curricula aim to help students experience happiness, engage in meaningful interactions, form good relationships, and achieve positive outcomes. Seligman has referred to this integrated approach as Positive Education, which Larson (2017) characterizes as an educational trend that merges academic learning with character development and well-being, drawing upon the science of well-being and happiness (Larson, 2017, p. 6).

Accordingly, Seligman in (2012), developed the Flourishing theory based on the PERMA model of well-being, using components of the True Happiness theory (2002). This model has been employed in the field of education, emphasizing the importance of civil institutions, such as schools and universities, in empowering and building positive character traits by activating and enhancing character strengths.

2.2 Well-Being According to the PERMA Model

Seligman formulated the Authentic Happiness theory (2002), which further developed in (2012) within the realm of positive psychology, where the three components of the True Happiness theory became the foundation for his new theory on flourishing. The Flourish theory is based on the PERMA model of well-being, comprises five elements: Positive Emotions (P), Engagement (E), Relationships (R), Meaning (M), and Accomplishments (A). These elements collectively constitute well-being, which can be evaluated within a multidimensional understanding of well-being achieved through optimal performance (Lai & Al, 2018, p.2).

Within the framework of the Flourish theory, Seligman (2011) emphasized that positive psychology surpasses the study of happiness. He asserted the need to attain optimal performance within a life connected to others through relationships. Therefore, the importance of the five domains of well-being was highlighted, as elevated utilization of these domains could enhance the individual's sense of Happiness and enable Flourishing. Enriching human strengths, as developmental and promotable qualities, allows us to elevate Psychological Adjustment as the essence of mental health.

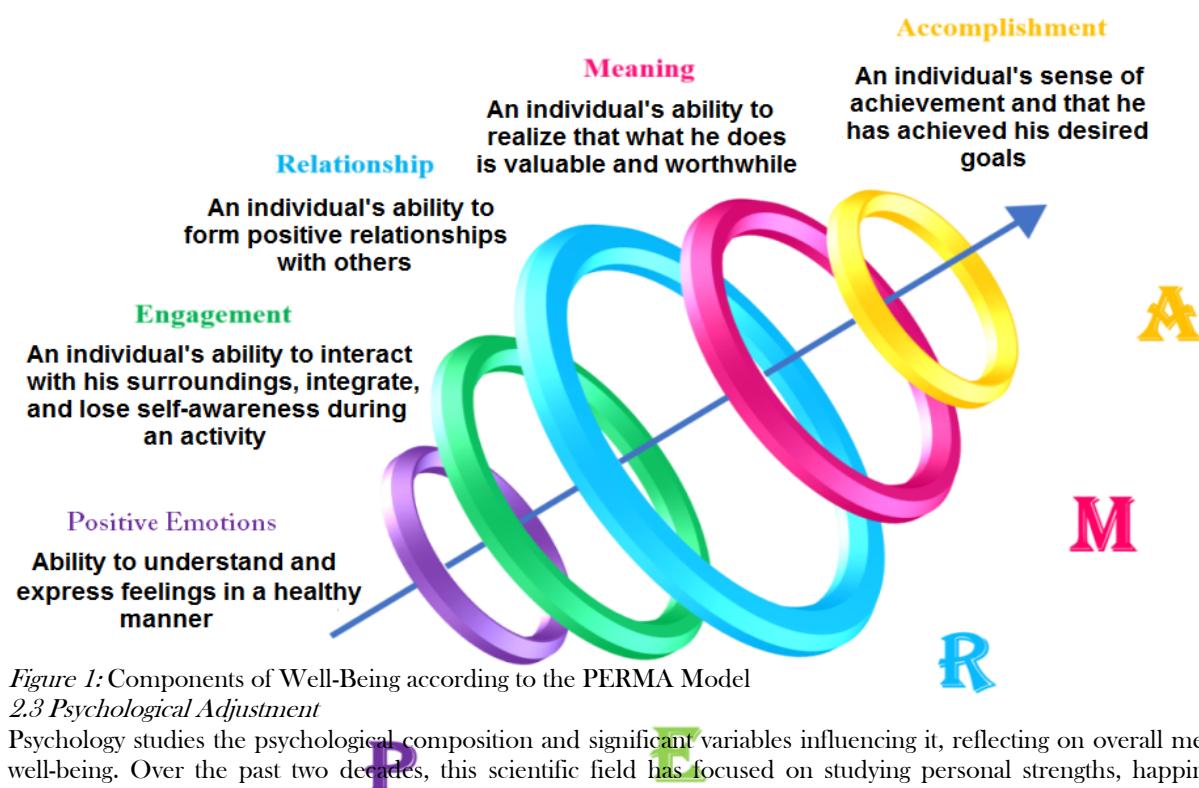


Figure 1: Components of Well-Being according to the PERMA Model

2.3 Psychological Adjustment

Psychology studies the psychological composition and significant variables influencing it, reflecting on overall mental well-being. Over the past two decades, this scientific field has focused on studying personal strengths, happiness,

psychological stability, life satisfaction, positive emotions, and their contribution to overcoming psychological stress. These indicators collectively point towards positive psychological adjustment. In this context, Scheier and Carver (1985) defined psychological adjustment as "a process individuals undertake to change behavior, achieve joy and pleasure within themselves or their environment". It results from any change in an individual's behavior that ultimately leads to a new state of internal and external harmony and balance. It is a continuous process aimed at developing one's potential and changing the environment in a healthy and effective way (as cited in Noor, 2017, pp. 31-32). Given the importance of psychological adjustment and the positive context in which it was placed, studies highlighting its significance have increased. These studies consistently affirm the importance of character strengths and their role in developing and enhancing well-being, psychological stability, and social appreciation. The objective is to overcome pressures that may lead to psychological disorders. Maximizing character strengths has proven, according to numerous global studies, to have a preventive role for those living in a good state of psychological adjustment. It also supports those facing adjustment problems, helping them activate their adjustment strategies a aspect we will explore through the analysis of the current research data.

3. Methodological Procedures

The current study followed a descriptive correlational methodology deemed suitable for the nature of the study, which investigates the relationship between Character Strengths and their correlation with both Well-Being and Psychological Adjustment among a sample of secondary school students. The methodology employed in this research paper included the following steps:

3.1 Research Question Identification

The research question was clearly defined to provide a focus for the study. The primary objective was to explore how Character Strengths improve Well-Being levels and enhance Psychological Adjustment.

3.2. Research Hypotheses

Based on the findings from the literature review conceptual frameworks, we formulated specific research hypotheses:

- There is a significant effect of Character Strengths on Well-Being among high school students.
- There is a significant effect of Character Strengths on Psychological Adjustment among high school students.
- There is a statistically significant relationship between Well-Being and Psychological Adjustment among high school students.

3.3 Research Sample

The research sample consisted of (n=60) individuals from secondary school students, aged between 14 and 17 years, chosen purposefully. The following table illustrates the characteristics of this sample:

Table 1

Distribution of the Sample by Affiliated Secondary School, and Academic Level

Secondary School	First Year Secondary	Second Year Secondary	Percentage
Bouguesmi	30	00	50%
Fakhar	00	30	50%
Total	60		100%

The table above indicates that the participation of Secondary School Bouguesmi reached 50%, with half of them in the first year of secondary school. Meanwhile, the percentage of Secondary School Fakhar in the sample was also 50%, with those studying in the second year of secondary school.

3.4 Research Tools

3.4.1 VIA-Youth Scale for Character Strengths and Virtues

The researcher utilized the VIA-Youth scale, designed for adolescents and youth, developed by Dahlsgard (2005). It measures (24) character strengths under six dimensions called virtues, with a total of (48) items. The scale was translated into Arabic by (Younes, 2017). The reliability of the instrument in the current research was estimated through internal consistency for a sample of (60) individuals. The correlation coefficients ranged between (0.743 and 0.878), all of which were high and statistically significant at the alpha level (0.01), instilling confidence in its results. Regarding the scale's stability, it was assessed using the Alpha-Cronbach coefficient, yielding a value of (0.909), indicating a high level of stability and reliability.

3.4.2 PERMA Scale for Well-Being

Developed by Butler and Kern (2016) based on Seligman's (2012) theory of flourishing, this scale consists of (23) items. It was translated into Arabic by Ben Aishouba (2021). Similar to the VIA-Youth scale, the reliability of the PERMA scale was assessed through internal consistency for a sample of (60) individuals. The correlation coefficients ranged between (0.679 and 0.869), all of which were acceptable to high and statistically significant at the alpha level (0.01), indicating strong internal consistency and reliability. The stability of the scale was estimated using the Alpha-Cronbach coefficient, yielding a value of (0.868), confirming a high degree of stability and trustworthiness of results.

3.4.3 Psychological Adjustment Scale

This scale was developed by Ben Amer and Silla (2013) and consists of (42) items assessing psychological adjustment across five dimensions: cognitive, academic, emotional, familial, and social. The reliability of the tool in the current

research was assessed through internal consistency for a sample of (60) individuals. The correlation coefficients ranged between (0.542 and 0.762), all of which were statistically significant at the alpha level (0.01). This suggests that the scale exhibits strong internal cohesion, making it credible and yielding reliable results. The stability of the scale was estimated using the Alpha-Cronbach coefficient, resulting in a value of (0.782), signifying a high level of stability and confidence in its results.

4. Results

4.1 Presentation of the First Hypothesis Results

The first hypothesis posited that: There is a significant effect of Character Strengths on Well-Being among high school students. To investigate this, a multiple regression analysis was conducted, and the results are presented in Table 2.

Table 2

Results of multiple regression analysis for Character Strengths on Well-Being

Independent Variables	r	r ²	F	Significance F	Beta	T-Value	Significance T	Variance Inflation Factor
Well-Being								
Creativity				,058	,084	-1,841	,074	
Perspective				-,059	,103	,499	,621	
Curiosity				,002	,003	-,612	,545	
Open-mindedness				,160	,226	,015	,988	
Love of Learning				,126	,197	1,374	,178	
Authenticity				,064	,106	1,187	,243	
Bravery				-,062	,086	,633	,531	
Persistence				,224	,301	-,508	,615	
Zest				,111	,180	1,868	,070	
Kindness				-,312	,375	1,085	,285	
Love Bestowal				-,073	,112	-2,392	,022	
Social Intelligence				,227	,324	-,666	,510	
Fairness				-,003	,004	2,028	,050	
Leadership				,090	,124	-,026	,980	
Teamwork				,268	,338	,737	,466	
Modesty				,204	,299	2,126	,041	
Prudence				,005	,007	1,851	,073	
Self-regulation				,008	,013	-,040	,968	
Forgiveness				,429	,511	,074	,941	
Gratitude				-,178	,253	3,513	,001	
Hope				,219	,307	-1,545	,131	
Spirituality				-,021	,033	1,911	,064	
Appreciation of Beauty				,111	,174	-,194	,847	
Humor	,882	,778	,5,102	,000	,106	,069	,302	

To explore the relationship between Well-Being and explanatory variables (Character Strengths), a multiple linear regression model was employed. The results indicated that the regression model was significant, with an F-value of (5.102), significant at the (0.01) level. Consequently, the first hypothesis is accepted, suggesting a meaningful impact of independent variables on the dependent variable (Well-Being). The model can predict 77% of the variance in Well-Being, as indicated by the determination coefficient (r²) of (0.778). Analyzing the (Beta) coefficients, the relationships between Well-Being and various Character Strengths were examined. Notably, Love Bestowal, Modesty, and Gratitude, showed significant positive associations with Well-Being. The variance inflation factor was less than (0.3) for all variables, indicating no multicollinearity issues within the model.

4.2 Presentation of the Second Hypothesis Results

The second hypothesis posited that: There is a significant effect of Character Strengths on Psychological Adjustment among high school students. To investigate this hypothesis, a multiple regression analysis was conducted, and the results are presented in Table 3.

Table 3

Results of multiple regression analysis for Character Strengths on Psychological Adjustment

Independent Variables	r	r ²	F	F Significance	Beta	T-Value	T Significance	Variance Inflation Factor
Psychological Adjustment								
Creativity	,782				,072	,469	,642	,079
Perspective					,106	,829	,413	,139
Curiosity					,026	,197	,845	,033
Open-mindedness					,161	1,046	,303	,174
Love of Learning					,234	1,674	,103	,272
Authenticity					,308	2,318	,026	,365
Bravery					,184	1,136	,264	,189
Persistence					,091	,577	,567	,097
Zest					,175	1,286	,207	,212
Kindness					,001	,006	,995	,001
Love Bestowal					,-186	-1,273	,211	,-210
Social Intelligence					,-102	,-692	,494	,-116
Fairness					,250	1,399	,171	,230
Leadership					,056	,844	,733	,058
Teamwork					,055	,329	,744	,056
Modesty					,-013	,-091	,928	,-015
Prudence					,-010	,-059	,953	,-010
Self-regulation					,064	,454	,653	,076
Forgiveness					,026	,161	,873	,027
Gratitude					,035	,229	,820	,039
Hope					,044	,292	,772	,049
Spirituality					,014	,098	,922	,017
Appreciation of Beauty					,044	,813	,756	,053
Humor					,132	,907	,871	,152

Table 3 presents the results of the linear relationship, revealing that the variance inflation factor for the model was less than (0.3), indicating a linear relationship between the variables. The results showed that the regression model was significant, with an F-value of (2.292), significant at the (0.01) level. Therefore, the second hypothesis is accepted, indicating a meaningful impact of independent variables on the dependent variable (Psychological Adjustment). The model can predict 61% of the variance in Psychological Adjustment, as indicated by the determination coefficient (r^2) of (0.611). Analyzing the (Beta) coefficients, the relationships between Psychological Adjustment and various Character Strengths were examined. Notably, Authenticity showed a significant positive association with Psychological Adjustment. The variance inflation factor was less than (0.3) for all variables, indicating no multicollinearity issues within the model. This suggests that through the strength of Authenticity, Psychological Adjustment can be predicted.

4.3. Presentation of the Third Hypothesis Results

The third hypothesis posited that: There is a statistically significant relationship between Well-Being and Psychological Adjustment among high school students. This hypothesis was statistically analyzed using the Pearson correlation coefficient, and the results are presented in Table 4.

Table 4

Pearson correlation coefficient between Well-Being and Psychological Adjustment

Variables	Sample Size	Correlation Value	Statistical Significance	Interpretation
Well-Being	Psychological Adjustment	60	0.710	0.000

The statistical analysis presented in the table above indicates a significant positive correlation between Well-Being and Psychological Adjustment among secondary school students. The Pearson correlation coefficient was calculated to be (0.710), which is a relatively high value. The significance level (0.000) is well below the commonly accepted alpha level (0.01), confirming the statistical significance of the relationship. Therefore, the third hypothesis is accepted, affirming the existence of a significant positive correlation between Well-Being and Psychological Adjustment among secondary school students.

5. Discussion

The current research results indicate the fulfillment of all hypotheses. In general, these findings suggest a strong positive correlation between Well-Being and Psychological Adjustment. Additionally, the results show a linear relationship, signifying that certain components of Character Strengths, specifically the strengths of Love Bestowal, Modesty, and Gratitude, can predict Well-Being. Meanwhile, the strength of Authenticity can predict Psychological Adjustment.

The outcomes of the first hypothesis, indicating that the strengths of Love, Humility, and Gratitude can predict Well-Being, somewhat align with the study by Hausler et al (2017b) on a student sample. They affirmed that strengths associated with happiness, such as Hope, Enthusiasm, Gratitude, Curiosity, and Love, were most correlated with Subjective Well-Being (SWB) and Psychological Well-Being (SWB) [both considered dimensions of Well-Being within the PERMA model utilized in the current research] (p. 1). Furthermore, the present study's results are consistent with the findings of Karris (2007), which identified a positive relationship between certain character strengths and Life Satisfaction, Well-Being, and Positive Emotion among students (as cited in Xie, 2015, pp. 31-32). Consequently, the use of Love, Gratitude, and Humility contributes to elevating levels of happiness and positive emotion, enhancing the sense of life satisfaction, ultimately achieving well-being. This is affirmed by the outcomes of our research, indicating that these character strengths collectively allow us to predict well-being.

The findings of the second hypothesis, indicating that Authenticity can predict Psychological Adjustment, align with Gustems and Calderon's (2014) study, which emphasized that Authenticity is among the strengths predicting higher levels of well-being in university students (p. 265). Therefore, Authenticity and Fairness can contribute to enhancing levels of self-well-being. Moreover, Authenticity may play a role in improving academic performance for students. Some personal strengths, such as Humility, Authenticity, and Kindness, can act protectively, serving as barriers against various psychological disturbances like obsessive-compulsive disorder, depression, aggression, and psychological shock (Bachene, 2020, p. 264). Based on this data, it becomes evident that activating and utilizing Authenticity in individuals can lead to psychological adjustment in their academic environment. Thus, Authenticity can predict psychological adjustment, supported by previous studies indicating a positive relationship between Authenticity, well-being, and improved academic achievement, in addition to its preventive role against various psychological disorders like obsessive-compulsive disorder, depression, aggression, and psychological shock.

As for the results of the third hypothesis, they reveal a strong positive correlation between Well-Being and Psychological Adjustment. This aligns with Castro's (2009) argument that psychological adjustment includes a positive sense of self-identity, life satisfaction, psychological well-being, and good mental health. Therefore, these variables are indicative of psychological adjustment, varying across individuals. Several studies, including those by Karris (2007) and Lounsbury et al. (2009), have shown that positive adjustment is linked to the enhancement of psychological well-being, life satisfaction, happiness, and positive emotion, contributing to a positive experience in students' lives (Xie, 2015, p. 9). Consequently, it is crucial to focus on promoting well-being as a significant indicator of psychological adjustment, which can positively impact individuals' mental health.

6. Conclusion

The results of this study affirm that maximizing and developing personal strengths allows individuals to achieve a more satisfying and happy life, reflected in the growing levels of well-being. This, undoubtedly, has a positive impact on individuals' psychological adjustment. The findings identified specific personal strengths believed to enhance well-being, such as the strengths of Love Bestowal, Modesty, Gratitude, and Authenticity. These strengths have been consistently emphasized in previous studies for their importance and role in achieving psychological adjustment.

However, it is essential to highlight certain limitations in these results, particularly related to the sample size, as it consisted only of individuals from two high schools in the Medea region. This may limit the generalization of the results, but it undoubtedly opens the door to further research. Therefore, it is recommended to conduct new studies with larger and more diverse samples, aiming to investigate how personal strengths contribute to influencing life trajectories based on the components of the Algerian environment. There is a need for additional research to gain a better understanding of how personal strengths are linked to the components of well-being according to the PERMA model.

Ethical Considerations

This study was conducted in accordance with internationally accepted ethical standards for research involving human participants. Prior authorization was obtained from the relevant educational institutions. Participation was voluntary, and informed consent was secured from all participants and, where applicable, from their legal guardians. Participants were informed of the purpose of the study and assured of confidentiality and anonymity. No identifying personal data were collected or disclosed. The research adhered to the principles of respect for persons, beneficence, and non-maleficence.

Author Contributions

- Behir Hamza: Conceptualization of the study, research design, data analysis, interpretation of results, and drafting of the manuscript.

- Bachene Hamza: Instrument selection, data collection, methodological support, and critical revision of the manuscript.
- Mimoun Mohamed: Literature review, statistical verification, data interpretation, and final manuscript review.

All authors have read and approved the final version of the manuscript and agree to be accountable for all aspects of the work.

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Conflict of Interest

The authors declare that there are no financial or non-financial conflicts of interest related to the conduct or publication of this study.

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