

Mediational Effect of Students' Creativity on the Relationship between Leadership and Academic Success: Well-Being as Moderator

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Abstract

Positive psychology has strong implications for students' success and holistic development in schools. The present study aimed to explore the mediating effect of creativity and the moderating effect of well-being on the relationship between student leadership and academic success at the secondary level. The research design of the present quantitative study was cross-sectional in nature. The sample of 811 secondary school students was selected using multi-stage and multi-method sampling techniques. The data were collected personally by face-to-face interaction using a self-developed questionnaire. Data were analysed with SPSS software (version 26) using simple linear regression, mediation, and moderation analysis by Hayes' Process macro. From analysis, we revealed that students' leadership ($\beta = .460$, $t[598] = 12.663$, $p < .001$) and creativity ($\beta = .460$, $t[598] = 12.663$, $p < .001$) significantly contributes to their academic success. Students' creativity ($B = .560$, $SE = .035$, $t[809] = 16.128$, $p < .001$, 95 % CI [.492, .628]) was found to be significant moderator for the relationship between leadership and academic success. It was further revealed that well-being ($\beta = -.013$, $SE = .028$, $t[809] = -.480$, $p = .631$) was not a statistically significant moderator for the relationship between leadership and academic success. Teachers were suggested to develop interventions based on the principles of positive psychology to influence various aspects of students' academic success in schools. Future research was suggested to explore the role of cultural and environmental factors on the causal relationships among leadership, academic success, creativity, and well-being.

Keywords: academic success, creativity, leadership, positive psychology, well-being.

Introduction

Positive psychology plays a crucial role in students' success in school. It fosters a positive mindset, resilience, creativity, and emotional well-being among students (Ronen & Kerret, 2020). Incorporating positive psychology principles into the education system makes students more likely to thrive academically, develop healthy relationships, and have a greater sense of purpose (Allison et al., 2021). It can support students to succeed in their academic and personal life. Moreover, positive psychology prepares students with the necessary tools to navigate challenges and hindrances, promoting a development mindset and perseverance (Wang et al., 2021). Creating a positive environment that emphasises strengths and encourages self-reflection empowers students to take ownership of their schooling and develop a lifelong interest in learning. Integrating positive psychology in education enhances holistic development and prepares students for a satisfying and successful future (Waters et al., 2022).

Positive psychology contributes to students' leadership skills in classrooms (Waters & Loton, 2019). By focusing on students' strengths and positive characteristics, positive psychology helps them develop a strong sense of self-confidence and trust in their abilities (Tabbasam et al., 2023).

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This, in turn, enables students to take on leadership roles with enthusiasm and effectively inspire and stimulate their peers toward attaining common goals. It not only prepares them for accepting immediate roles in schools and society. It also equips them with valuable skills that can be useful in various aspects of their academic and non-academic lives. This school of psychology teaches students to communicate, collaborate, and problem-solve effectively, essential skills for successful leadership (Roffey, 2022). It helps students encounter challenges with confidence and determination by fostering a positive mindset and resilience, improving their leadership abilities (Dewaele et al., 2019).

Academic success in the present study is characterised by achieving grades, completing degrees, and having a balanced behaviour (Mishra, 2020). However, academic success is not solely defined by these external factors only. It also includes developing critical thinking skills, effective communication abilities, and a thirst for knowledge. Moreover, academic success involves applying theoretical knowledge to real-world situations and adapting to changing circumstances (Mahanal et al., 2019). Positive psychology fosters students' academic success by promoting attitudes and practices that enhance learning and personal development in schools. These attitudes and practices encourage students to embrace success by encountering challenges and seeing failures as opportunities for balanced development (Chu, 2022). Additionally, positive psychology emphasises the importance of self-regulation and goal-setting, helping students develop the discipline and motivation necessary for academic achievement. Positive psychology enhances academic success and contributes to individuals' overall well-being and fulfilment by focusing on these aspects (Bakhtiar & Hadwin, 2022).

Creativity in the present study is the capacity to generate novel and valuable ideas, solutions, and expressions. It includes thinking outside the box and exploring new viewpoints to develop innovative concepts (Mikalef & Gupta, 2021). Creative individuals often possess a unique ability to connect unrelated ideas, leading to innovations and developments in various fields. It is evident from the literature that it may help students to improve their creativity (Gould, 2023). It focuses on enhancing individuals' well-being and encouraging their strengths, which can contribute to the development of creativity. By fostering a positive mindset and encouraging self-belief, students may feel more empowered to take risks and think outside the box, ultimately unlocking their creative potential. Additionally, positive psychology interventions such as gratitude exercises and mindfulness practices can cultivate a conducive environment for creative thinking by reducing stress and enhancing cognitive flexibility (Pinkow, 2023).

Students' well-being in a classroom context refers to optimal psychological, social, and physical functioning in the school environment (Tapia-Fonllem et al., 2020). It involves their emotional and mental health, ability to form positive relationships with peers and teachers, and overall physical well-being (Morales-Rodríguez et al., 2020). Creating a supportive and inclusive school environment promotes students' well-being and ensures academic success (Govorova et al., 2020). Students can develop a growth mindset and flexibility by including positive psychology principles in the school environment, allowing them to overcome challenges and thrive

academically (Bowman & Levto, 2020). Moreover, promoting a sense of belonging and acceptance in the school community can improve students' self-efficacy and motivation to succeed (Morris et al., 2023).

Despite the growing global interest in the relationship among students' leadership, creativity, well-being, and academic success, there needs to be more research in the Pakistani context, particularly at the secondary school level in Punjab. This gap in research hinders our understanding of how creativity and leadership skills contribute to Pakistani secondary school students' academic success. Understanding the relationship between creativity, leadership, and academic success is vital for developing effective educational strategies in Pakistan. By conducting research in the Pakistani context, we can recognise the specific effect of these variables that promote or hinder secondary-level students' academic success, ultimately leading to improved educational outcomes for secondary school students.

Research Objective

Based on the above argument, the objective of the current study was to explore the mediating role of students' creativity and the moderating effect of their well-being on the relationship between students' leadership and their academic success at the secondary level.

Hypotheses

H1: Students' leadership skills contribute to their academic success.

H2: Students' creativity positively influences their academic success.

H3: The effect of leadership on students' academic success is mediated by their creativity.

H4: Students' well-being moderates the relationship between leadership and their academic success.

Literature Review

Leadership and Academic Success

Student leadership is often lauded as a critical indicator of future success (Shatzer et al., 2014). It is argued in the literature that students gain a wide range of transferable abilities from leadership roles in the classroom, including time management, goal planning, and effective communication (Leithwood et al., 2020). According to Schunk (2023), students with higher levels of self-efficacy are more likely to put forth effort when given academic challenges. Schwarz et al. (2020) agree, arguing that taking on a leadership role fosters accountability and encourages individuals to study for their own sake. In support of this argument, Bowden et al. (2021) provide data showing a positive correlation between students' involvement in leadership roles and their success in school.

Research has demonstrated that student leadership exerts a positive influence on academic success. Multiple leadership styles, including emotional, transformational, and charismatic

leadership, have impacted student engagement, trust in themselves, and academic success (Kim et al., 2023). Furthermore, research has indicated that successful student leadership can enhance academic engagement by considering various factors, including active participation, self-efficacy, and motivation (Tortosa-Martínez et al., 2022). Moreover, educational leaders can exert influence in directing students towards constructive methods of expressing active participation, expectations of peers, and offering social resources, potentially augmenting student success (Fairman & Mackenzie, 2015). Research has shown that engaging in student leadership activities in schools, specifically as a class monitor, positively impacts academic success, both in the immediate term and over an extended period (Deng et al., 2020). In the context of fostering success in school, it is widely acknowledged that student leadership and peer engagement play essential roles (Nguyen, 2019).

Students' Creativity and Academic Success

Positive psychology has significantly enhanced our understanding of the relationship between creativity and success in school (Li, 2020). Drawing from positive psychology, creativity is not solely a characteristic but a condition that can be fostered to augment several facets of student development, such as academic performance (Zhi & Wang, 2023). From this particular standpoint, creativity is regarded as a means to foster pupil participation and satisfaction, resulting in a natural sense of fulfilment in acquiring knowledge and achieving competence (Shao et al., 2020). According to Halverson and Graham (2019), student involvement in creative endeavours increases the likelihood of experiencing a state of flow. Positive psychologists consider 'flow' a peak engagement experience with profound and immersive concentration. The feeling of flow has been associated with elevated levels of academic performance due to its relationship with enhanced focus and perseverance in educational activities (Wong & Liem, 2021).

It is evident from the literature that there is a strong relationship between creativity and success in school during adolescence, with particular emphasis on investigating fluency, originality, and adaptability as critical factors (Rus, 2020). Creativity, physical setting, and school climate favourably impact student performance. In contrast, the influence of student motivation on performance is not shown to be as significant (Mihai-Yiannaki & Savvides, 2012). Positive psychology, which encourages students to express their creativity in the classroom, can lead to an increasing trend of higher grades (Dewaele et al., 2019). Broaden-and-build emphasises that a person's capacity for innovative thought and problem-solving increases as their range of pleasant emotions does (Chen & Padilla, 2022). When applied to education, the good feelings generated by engaging in creative activities may improve students' learning ability (Zainuddin et al., 2020). Moreover, research shows that students' academic performance, happiness, and life satisfaction all improve when they are given opportunities to develop their creative strengths in the classroom (Feraco et al., 2023). This indicates that the emphasis on strengths and virtues in positive psychology can be carefully integrated with pedagogical practises creating a learning environment that encourages creativity and academic performance (Waters & Loton, 2019).

Students' Creativity, Leadership, and Academic Success

Positive psychology convincingly justifies the interconnected relationship among students' creativity, leadership, and academic performance (Abbas et al., 2022). Fostering creativity is a critical objective and a means to cultivate leadership skills and succeed in the classroom (Karakose et al., 2021). In this view, creativity catalyses student participation, paving the way for future leadership and academic success. Yeh et al. (2019) found that students were more inclined to take initiative when interested in what they were learning. According to the principles of positive psychology, there is a virtuous cycle between developing these skills and enhancing the outcomes (Weziak-Bialowolska et al., 2020).

Researchers in the field of positive psychology, however, argue against an overarching solution, as the interplay between individual traits like creativity and leadership and academic success can vary greatly depending on the student and the school environment (Derakhshan et al., 2023; Fullerton et al., 2021). There is evidence of the positive connection between these concepts, but the knowledge of how that relationship plays out in different people and settings is limited (Ganguly et al., 2019). Cultural norms and beliefs may influence how people express and respect creativity and leadership differently (Afsar & Umrani, 2020). There is a lack of empirical research on how the principles of positive psychology can be adapted to enhance students' creativity and leadership skills in a way that aligns with local cultural practices and contributes to their academic success within Pakistan's secondary education system.

Students Well-being, Leadership, and Academic Success

From the perspective of positive psychology, students' sense of well-being is a crucial component that can significantly improve their leadership skills and academic performance (Morales-Rodríguez et al., 2020). According to the principles of positive psychology, student well-being includes a sense of meaning, engagement, and growth that is beneficial to learning and development (Ronen & Kerret, 2020). It extends far beyond the absence of distress. Students are more likely to take on leadership responsibilities and perform academically when their psychological needs are satisfied, encouraged, and appreciated (King & Bunce, 2020). Orson et al. (2020) argue that students develop resilience, empathy, and the ability to push themselves and others when they are emotionally and cognitively supported to step outside their comfort zones.

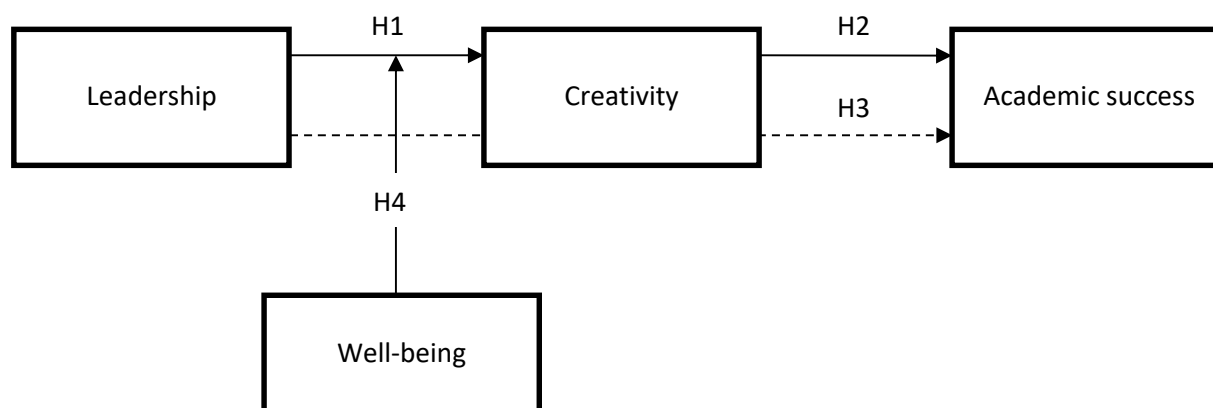
It is evident from the literature that students' well-being improves their social and emotional competencies and fosters a constructive school environment; it is hypothesised to directly and indirectly, impact students' leadership growth and academic performance (Zheng, 2022). However, the claim that increased happiness automatically boosts leadership and academic performance is not without its detractors (Aknin & Whillans, 2021). The intricacy of these categories has been criticised because their interaction is probably two-way and subject to many other factors, such as the individual's background, family, and social environment (Chen & Antonelli, 2020). Moreover, the problem remains in operationalising and evaluating well-being in a practical way that closely connects with leadership abilities and academic achievement indicators (Adedeji et al., 2023).

Conceptual Model

Positive psychology is the branch of philosophy that emphasises human potential (Kour et al., 2019). Over the last two decades, positive psychology has investigated human virtues and strengths to solidify the traits of individuals (Donaldson et al., 2019). The present study is an effort to understand how student leadership solidifies and contributes to their academic success and how personal traits like creativity and well-being influence this relationship. The research model is presented in Figure 1 based on these individual factors. It is aligned with the study's hypotheses, which were developed on the argumentative literature review and study gap.

Figure 1

Conceptual Model



Materials and Methods

The present study explored the implications of positive psychology in schools to find how it contributes to various aspects of students' academic lives for developing balanced personalities. The present paper examined the mediational effect of students' creativity and the moderating effect of well-being on the relationship between their leadership skills and academic success in the schools. These causal relationships are guided to be carried out under the positivistic school of thought (Park et al., 2020). Therefore, the researchers followed the positivism research philosophy to initiate different study processes. The quantitative method was used to conduct the study at the secondary school level in Punjab.

Research Design

The research design of the study was a cross-sectional research design. The researcher collected data at a single point in time to explore different causal relationships among study variables to explore the current situation of the secondary school students' leadership skills developing in schools, their creativity development initiatives, their level of well-being, and the role of these factors to their academic success by using the lens of positive psychology. It is evident from the

literature that when the current situation of any phenomenon is studied, a cross-sectional research design helps to explore the status of the problem at the particular time of data collection (Park et al., 2019). The cross-sectional research design is advocated to bring the nature of the situation at that particular time (Spector, 2019). Hence, we followed the cross-sectional research design in the present study.

Participants

The study participants were secondary school students enrolled in the province of Punjab during the academic session of 2023-24. These students studied science and arts subjects in the private and public secondary schools of Punjab. They were from the 10th grade and of an average age group of 15-18 years. All boys and girls studying in Punjab were the target population. As most of the students studying in Punjab had similar characteristics like age group, study scheme of the Board of Intermediate and Secondary School (BISE), the curriculum developed by the Punjab Curriculum and Textbook Board (PCTB), they were being taught by teachers who were recruited through the uniform recruitment policies of Punjab government. After being recruited, they were trained by only one department (*Quaid-e-Azam Academy for Educational Development Punjab*) on the same training material. Because of these similar traits, we selected the district Kasur as a typical geographical unit for the study sample. Using multi-stage (districts, schools, and students) and multi-method method (stratified and simple random) sampling techniques, we selected a sample of 1000 secondary-level students; 811 students responded to the questionnaire with a response rate of 81 %. Their demographic information is provided in Table 1.

Table 1

Demographic Information of Study Participants (N = 811)

Variable	Category	Frequency	Percentage
Gender	Boys	330	41
	Girls	481	59
School type	Public	355	44
	Private	456	56
Locality	Urban	504	62
	Rural	307	38
Major	Science	590	73
	Arts	221	27

Table 1 indicates that most of the students who responded to the questionnaire were girls (59 %), and boys (41) showed less interest in participating in the current study. Among these, 456

students were from private schools, and the remaining 355 were from public schools in Kasur. It shows that students are now heading more towards private schools. Out of these, the majority of the students (62 %) were from urban areas, and the rest (38 %) were from rural areas. Most of the students (73 %) studied science subjects, while a few (27 %) studied arts subjects. It shows that most students are now more interested in science than other secondary-level subjects.

Measure

After extensive reading of the related literature, we developed a questionnaire to collect data from secondary students on their leadership skills, academic success, creativity, and well-being. The questionnaire had two parts: demographic information and scale items. We asked about their gender, school type, locality, and major demographics. Scale items were developed on a five-point Likert scale with options ranging from 1 (strongly agree) to 5 (strongly disagree). Student leadership was measured using sample items like, *"I feel capable of motivating my peers to achieve our common goals."* Their academic success was measured using statements like, *"I set academic goals for myself and regularly meet them."* Students' creativity was measured against items like, *"I enjoy trying new methods of learning to understand difficult concepts."* Their well-being was measured by statements like, *"I can manage the stress of schoolwork without becoming overwhelmed."* Initially, the questionnaire had 23 items. After the expert opinions of three PhDs and pilot testing (35 students not part of the study sample), we revised and modified statements to make them clear, accessible, and understandable for students. After expert opinion, we reduced it to 18 items and translated them into Urdu for students to better understand. Hence, a bilingual scale was used for data collection. The first author collected data by personally visiting the school. After the school principal and class teachers' consent, a short briefing was given to students to sensitise them to the purpose of the study and the data collection process. Data collection was completed in September and October of 2023. The results for the reliability of the four sub-scales are provided in Table 2.

Table 2

Sub-Scale Reliability Analysis

Sr no	Sub-scale	N	Cronbach alpha
1	Leadership	4	.70
2	Academic success	4	.75
3	Creativity	5	.77
4	Well-being	5	.71
5	Total scale	18	.89

Table 2 provides the reliability analysis of the sub-scales and total scale. It was carried out using Cronbach's alpha for the internal consistency of the items used to measure study variables from

the secondary students. All sub-scales exhibit Cronbach alpha value over .70, which meets the criteria for the acceptability and useability of the questionnaire, particularly in social sciences (Goodboy & Martin, 2020; Trizano-Hermosilla & Alvarado, 2016).

Data Analysis

After collecting data, it was managed in SPSS (Statistical Package for Social Sciences) and Excel files. Initially, it was screened out for identifying and dealing with missing values and outliers. Then, we tested the assumptions of parametric statistics. After ensuring the data's normality, equal variance, and independence, we used descriptive (mean, standard deviation) and inferential statistics (Pearson correlation, simple linear regression, median, and moderation using Process macro). The results are interpreted in the relevant sections for study hypotheses.

Research Ethics

We collected data from the secondary school students by visiting them personally in their schools. They were briefed about the data collection process and the study's significance. Informed consent was obtained from school principals, class teachers, and study participants. No potential harm was involved as the data were collected in their classrooms. However, following the research ethics, we ensured that secondary school students might face no physical, psychological, or ecological threats. They were given the right to withdraw from the process of data collection. Availing this right, around 190 students did not respond to the questionnaire. The anonymity and confidentiality of study participants were ensured by not revealing their identity in this study.

Results

After testing the assumptions of parametric statistics, we used descriptive analysis (mean, standard deviation) and Pearson correlation for the demographic and sub-scale variables to find the leading contributions and the strength of the relationships. The results are presented in Table 3.

Table 3

Correlation Table (N = 811)

Variable	1	2	3	4	5	6	7	M	SD
Gender								1.59	.49
School type	.028							1.56	.50
locality		.033						1.38	.48
Major			-.027					1.27	.45
Leadership				.079*				3.78	.64

Academic success	.612**	3.75	.70
Creativity	.683**	3.79	.62
Well-being	.628**	3.77	.60

* $p < .05$ (2-tailed), ** $p < .01$ (2-tailed)

In Table 3, it is indicated that creativity shows the highest contribution to the scale results ($M = 3.79$, $SD = .62$), followed by leadership ($M = 3.78$, $SD = .64$), well-being ($M = 3.77$, $SD = .60$) and academic success ($M = 3.75$, $SD = .70$). It is also revealed that all the sub-scale variables showed linear, positive and statistically significant 2-tailed correlations.

Contribution of Leadership to Academic Success

To explore the contribution of leadership to students' academic success at the secondary level, we designed the first hypothesis and tested it using simple linear regression at the significance level of .001. It provided us with results for the contribution and prediction of leadership to academic success. The results are presented in Table 4.

Table 4

Contribution of Leadership to Academic Success

Variables	B	SE (B)	β	t	p
(Constant)	1.213	.117		10.346	.000
Leadership	.672	.031	.612	21.992	.000

$R^2 = .374$, $F = 483.655$, $p = .000$

In Table 4, the regression model indicates that leadership skills significantly predict students' academic success ($R^2 = .374$, $F[1, 810] = 483.655$, $p < .001$). This means that their leadership skills explain approximately 37.4 % of the variance in the students' academic success. The regression coefficient (B) for leadership is .672, and it is statistically significant ($t[809] = 21.992$, $p = .000 < .001$). The positive B value suggests that academic success also increases as leadership scores increase. In other words, students rated higher on leadership skills will likely have better academic success. The standardised coefficient (β) of .612 indicates a strong positive relationship between leadership and academic success. The constant (intercept) of the equation is 1.213, which represents the expected mean values of academic success when the leadership score is zero. Given that the p-value for the constant is less than .001, this intercept is significantly different from zero, suggesting that other factors contribute to academic success when leadership scores are not considered. From this analysis, we can conclude that student leadership skills at the secondary level significantly contribute to and predict their academic success. The visual representation of this prediction is provided in Figure 2.

Figure 2

Contribution of Leadership to Academic Success

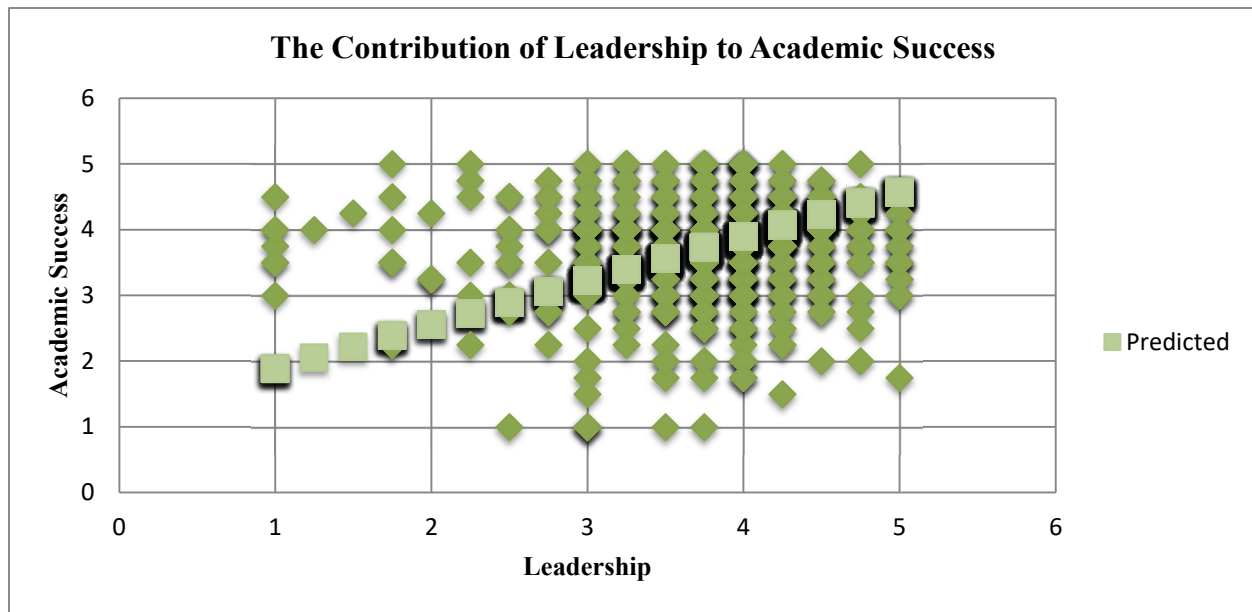


Figure 2 shows that leadership significantly predicts and contributes to students' academic success at the secondary level.

Contribution of Creativity to Academic Success

To explore the contribution of creativity to students' academic success at the secondary level, we developed the second hypothesis and tested it using simple linear regression at the alpha value of .001. The results are presented in Table 5.

Table 5

Contribution of Creativity to Academic Success

Variables	B	SE (B)	β	<i>t</i>	<i>p</i>
(Constant)	.825	.112		7.381	.000
Creativity	.775	.029	.683	26.578	.000

$R^2 = .466, F = 187.325, p = .000$

In Table 5, we revealed that the constant (intercept) is .825, which means that when creativity is zero, the expected value of academic success is .825. The intercept is significantly different from zero ($t[809] = 7.381, p = .000 < .001$), indicating that other factors contribute to academic success when creativity is not present. The coefficient for creativity is .775. This value is the

estimated change in the academic success for each one-unit increase in creativity. Given that the p-value is less than .001, this relationship is statistically significant, and we can be confident that creativity positively affects academic success at the secondary level. The standardised coefficient (β) is .683, suggesting a strong and positive relationship between creativity and students' academic success. This indicates that creativity explains a substantial portion of the variance in academic success. The value of R-square is .466, indicating that approximately 46.6 % of the variance in academic success is explained by creativity. This is the model's goodness of fit, showing that a moderate proportion of the total variability in academic success can be predicted by creativity. The F-statistics is 705.325 with a p-value of less than .001, which indicates that the overall regression model is statistically significant. The visual representation of this prediction is provided in Figure 3.

Figure 3

Contribution of Creativity to Academic Success

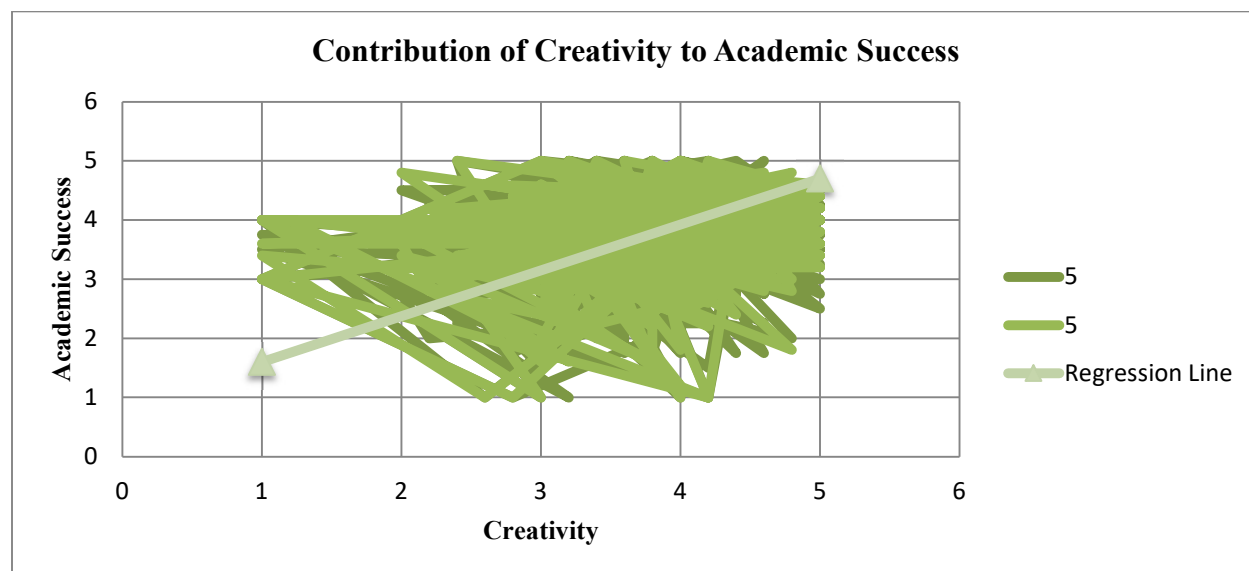


Figure 3 indicates that creativity significantly contributes to students' academic success at the secondary level. It also provides evidence that there is a positive, linear, and strong relationship between creativity and students' academic success at the secondary level.

Mediational Effect of Students' Creativity on Leadership and Academic Success

We developed a third hypothesis to investigate the mediating role of students' creativity in the relationship between leadership and their academic success. For this hypothesis, we used the process macro of Hayes, and the analysis results are provided in Table 6.

Table 6

Mediational Effect of Students' Creativity on Leadership and Academic Success

	Coefficient (B)	SE	T	p	LLCI	ULCI
Constant	.348	.115	3.002	.003	.122	.575
Leadership	.341	.034	10.155	.000	.275	.407
Creativity	.560	.035	16.128	.000	.492	.628
Direct effect	.341	.034	10.155	.000	.275	.407
Indirect effect	.331	.037	Bootstrapped 95 % CI		.260	.406

Table 6 provides the results of the mediation analysis. The results indicate a significant effect of student leadership on their academic success, with a coefficient (B) of .341, $SE = .034$, $t(809) = 10.155$, $p < .001$, 95 % of CI [.275, .407]. The mediator (creativity) was also found to significantly contribute to the dependent variable (academic success), $B = .560$, $SE = .035$, $t(809) = 16.128$, $p < .001$, 95 % CI [.492, .628]. Additionally, the direct effect of leadership on academic success by controlling creativity was also statistically significant, $B = .341$, $SE = .034$, $t(809) = 10.155$, $p < .001$, 95 % of CI [.275, .407]. The indirect effect of leadership on academic success through creativity was significant, with an effect size of .331 and a bootstrapped 95 % confidence interval that did not include zero [.260, .406], suggesting that the mediating role of creativity is statistically significant. In short, these results show that creativity mediates the relationship between student leadership and students' academic success at the secondary level.

Moderating the Effect of Well-being on Students' Leadership and Academic Success

To explore the moderating effect of well-being on the relationship between leadership and the students' academic success, we designed the fourth hypothesis that was tested using the Process macro of SPSS, and the results are presented in Table 7 below.

Table 7

Moderating Effect of Well-being for Leadership and Academic Success

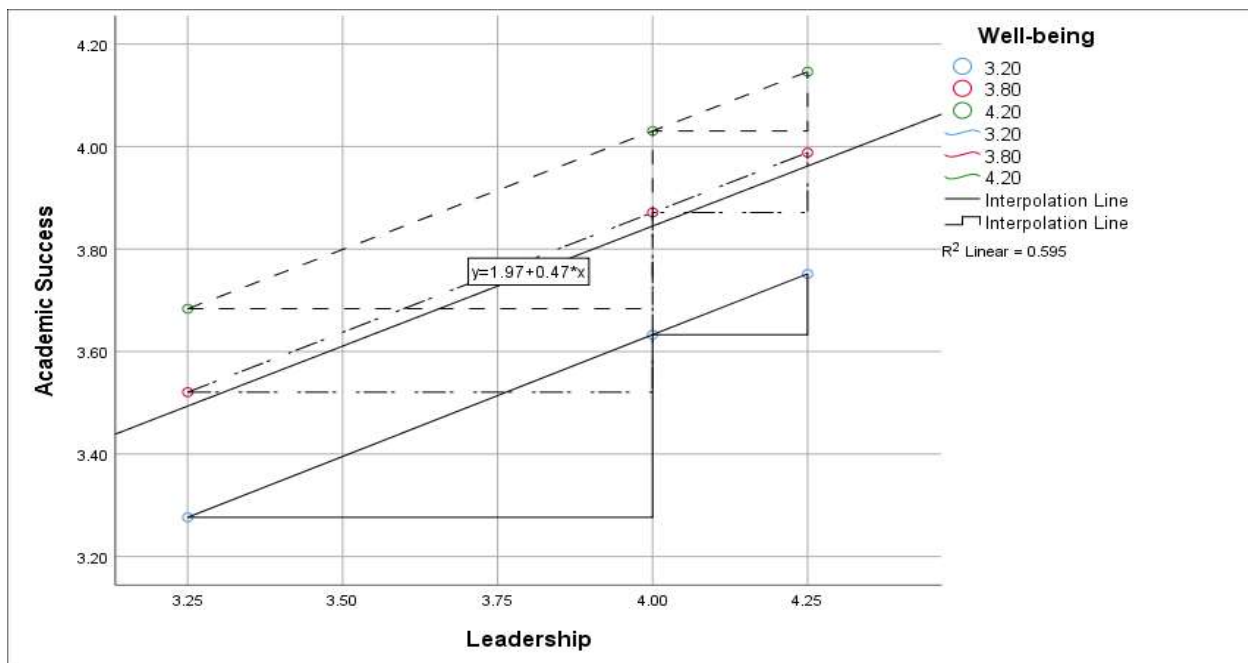
	Coefficient (B)	SE	t	p	LLCI	ULCI
					Confidence interval (95 %)	
Constant	.296	.326	.909	.364	-.343	.935
Effect of leadership	.516	.098	5.293	.000	.325	.708
Effect of well-being	.449	.097	4.650	.000	.259	.638

Interaction (leadership x well-being) $\beta = -.013$, $SE = .028$, $t(807) = -.480$, $p = .631$, $R^2 = .0002$.
 $R^2 = .462$, $F(3, 807) = 230.520$, $p < .001$

In Table 7, we presented the results of the moderation analysis carried out for the fourth hypothesis. The model summary indicates that the combined effect of leadership, well-being, and their interaction (Int-1) accounts for 46.20 % of academic performance, $R^2 = .462$, $F(3, 807) = 230.520$, $p < .001$. This suggests that the model is significantly predictive of academic success. The analysis further indicates that the main effects of the model were significant. Leadership had a positive effect on academic success ($\beta = .516$, $SE = .098$, $t(809) = 5.293$, $p = .000 < .001$), as did well-being ($\beta = .449$, $SE = .097$, $t(809) = 4.650$, $p = .000 < .001$). These results indicate that leadership and well-being significantly contribute to academic success in secondary school students. However, the interaction effect (leadership x well-being) was not statistically significant ($\beta = -.013$, $SE = .028$, $t(809) = -.480$, $p = .631$) with a change in R^2 of only .0002 due to the interaction term, $F(1, 807) = .230$, $p = .631$. This suggests that well-being does not significantly moderate the relationship between leadership and academic success at the 95 % confidence interval. The results of this moderation analysis are also shown in Figure 4.

Figure 4

Moderating Effect of Well-being for Leadership and Academic Success



Discussion

We found that students' leadership significantly contributes to their academic success. The importance of leadership abilities in promoting academic success is consistent with Shatzer et al.

(2014) findings, which highlight leadership as a critical component of student development. Leithwood et al. (2020), who believe that leadership positions serve as a means of exchange for necessary abilities advantageous in academic settings, also corroborate the present study findings. These results are supported by Schunk's (2023) findings on the influence of self-efficacy, which suggest that leadership may improve students' motivation and self-belief—critical for overcoming academic difficulties. Schwarz et al. (2020) agreed that other elements play a significant role in academic performance, indicating that leadership is just one element of a larger range of factors influencing educational outcomes. Additional support is provided by Kim et al. (2023), demonstrating how different leadership philosophies might affect students' academic confidence and participation. The intricate relationship between leadership and academic success is reinforced by the research conducted by Fairman and Mackenzie (2015), who examine educational leaders' significant influence in fostering positive student engagement, and Deng et al. (2020), who emphasise the long-term educational advantages of student leadership positions.

The analysis of the second hypothesis revealed that creativity also significantly contributes to students' academic success at the secondary school level. The established correlation between creativity and academic success in our research aligns with the findings in positive psychology, including those presented by Li (2020), which emphasise the significant impact of creativity on students' success. The relationship between creativity and school success is supported by the research of Zhi and Wang (2023), who propose that creativity can be cultivated and has a positive impact on academic success. This finding aligns with the perspective of Shao et al. (2020), who also emphasise the role of creativity in boosting student engagement. Halverson and Graham (2019) examine the phenomenon of 'flow' during creative endeavours as a facilitator of academic attention. Our research findings are consistent with those of Dewaele et al. (2019) and Feraco et al. (2023), indicating that engaging in creative expression within educational contexts improves academic performance and increases life satisfaction and happiness. Additionally, Waters and Loton (2019) reinforce the notion of synergy and propose integrating positive psychological principles with pedagogy to enhance creativity and learning. This highlights the diverse advantages of creativity in fostering academic achievement among secondary-level students.

The results of our study indicate a significant association between student leadership and academic achievement. Furthermore, our findings suggest that creativity is important in mediating this relationship. These findings align with the principles of positive psychology advocated by Abbas et al. (2022), which propose a synergistic relationship between creativity, leadership, and academic success. Karakose et al. (2021) emphasise fostering creativity to cultivate leadership abilities. Our findings align with this perspective, suggesting that creativity contributes to academic achievement and amplifies leadership's impact on academic performance. This finding aligns with the research conducted by Yeh et al. (2019), which observed a positive correlation between student engagement in creative learning and an increase in student initiative. Nevertheless, the heterogeneity in the interaction of these characteristics

among diverse student cohorts and educational environments, as highlighted by Derakhshan et al. (2023), implies that the association may not hold true in all cases. Ganguly et al. (2019) and Afsar and Umrani (2020) have drawn attention to the significance of cultural factors in the manifestation and assessment of creativity and leadership. This particular aspect has not been thoroughly examined in our study. However, it holds potential implications for the practical implementation of positive psychology principles within varied educational contexts, such as those in Pakistan. This gap underscores the necessity for further empirical study that is culturally sensitive to understand how creativity and leadership can be nurtured to promote academic achievement in different environments.

Our moderation analysis's findings clarify the distinct influences of leadership and well-being on academic success. However, our results do not support the moderating effect of well-being on the relationship between leadership and academic achievement. The authors like Morales-Rodríguez et al. (2020) and Ronen & Kerret (2020) emphasise the significance of well-being in leadership abilities and academic achievement, thereby demonstrating a partial alignment with positive psychology perspectives. This finding highlights the complex and diverse factors that contribute to student success. According to the studies conducted by King and Bunce (2020) and Orson et al. (2020), there is a suggestion that the presence of well-being plays a crucial role in facilitating students' ability to assume leadership positions and enhance their academic performance. Our research further substantiates this assertion, revealing noteworthy individual impacts on leadership and well-being. However, as shown by Zheng's (2022) study, the existing body of literature posits that well-being can positively influence leadership abilities and academic achievements. In contrast, our findings do not provide evidence of a substantial interaction effect between well-being and these outcomes. This prompts an examination of the criticism stated by Aknin and Whillans (2021) regarding the transition of enhanced well-being into improved leadership and academic performance while also considering the critique put forth by Chen and Antonelli (2020) regarding the intricate nature of these associations. Adedeji et al. (2023) additionally highlight the challenge of effectively operationalising the concept of well-being in a way that intersects with leadership and academic success. This suggests the necessity for advanced ways of incorporating these variables into educational research and practise.

Conclusion

The present research examines the mediating role of creativity and the moderating impact of well-being on the relationship between student leadership and academic success at the secondary level. This study has significantly contributed to our understanding of the complex dynamics involved in educational success. The results of our study emphasise the role of creativity as a crucial mediator, amplifying the impact of leadership on academic success. This supports the idea that cultivating creative abilities might be a viable approach to promoting educational progress. In contrast to our initial hypotheses, it was shown that well-being does not function as a moderator. Instead, it plays an autonomous role in contributing to academic achievement, emphasising the intricate relationship between psychological elements and leadership in shaping educational results. The contributions of leadership and well-being to academic achievement

indicate the need for a comprehensive approach to student development. It is evident that fostering leadership abilities and promoting well-being are both essential for achieving academic success. This study enhances the comprehension of how the cultivation of leadership skills, along with the promotion of creativity and well-being, can enhance students' academic success.

As part of their efforts to cultivate future leaders, schools should think about introducing programmes that encourage students' creativity. The effect of student leadership on academic success might be strengthened if schools incorporated creative thinking exercises into student leadership. Our research suggests that the mediation between leadership and academic achievement can be supported by providing opportunities for students to engage in creative problem-solving and interdisciplinary learning. More research is needed to determine the precise relationship between well-being and academic success and how the many components of well-being (such as emotional, psychological, and social well-being) relate to one another and with student leadership to produce specific outcomes. This may help educational leaders better appreciate the complexities of promoting student well-being. The relationship between leadership, creativity, and academic success is complex; thus, research should also look into the role of cultural and environmental factors.

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