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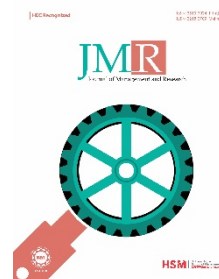
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Role of Narcissism in Entrepreneurial Traits Mediated by Entrepreneurial Intention and Entrepreneurial Motivation among University Students

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Abstract

This study investigates the influence of narcissism and entrepreneurial ambition on entrepreneurial intention and self-efficacy in students studying entrepreneurship. This study employed an intricate relationship between narcissistic tendencies, entrepreneurial drive, entrepreneurial intention, and self-efficacy among students. The study also applied a positivist ideology and a deductive approach in quantitative research. A total of ($N = 766$) responses were collected for inquiry from entrepreneurship students in Pakistan, a South Asian country. Data was analyzed through SPSS 24.0 and AMOS 26, while utilizing multiple linear regression models and commonly employed mediation procedures. The findings suggested that the relationship between entrepreneurial motivation and entrepreneurial intention is such that entrepreneurial motivation positively influences entrepreneurial intention. The study made a valuable contribution to the existing body of knowledge on the extended model of the Theory of Planned Behavior. It has important implications for university administration and teachers who are responsible for students displaying high levels of narcissism or psychopathy. These individuals should be given proper care, education, and targeted interventions aimed at reducing their narcissistic and psychopathic tendencies to enhance their entrepreneurial intentions. According to the knowledge, this is the first study of this context which contributed to the literature on of narcissism, entrepreneurial intention and self-efficacy. Second, the study used (Entrepreneurial Motivation) as Moderator (Exogenous force) in this study as the study was conducted in Pakistan. So, the study has a great contribution to this perspective as well.

Keywords: entrepreneurship, entrepreneurial intention, entrepreneurial motivation, narcissism, narcissistic approach, self-efficacy

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Introduction

The term "narcissism" is commonly used to describe an individual who displays excessive self-interest, self-centeredness, egotism, self-promotion, overconfidence, and boldness. The primary characteristics of vulnerable narcissism, as assessed by specialists, include depression, anxiety, mistrust, negative temperament, neuroticism, and borderline features. The reason is that it combines a blend of positive attributes, such as assertiveness, self-efficacy, curiosity, communication skills, high confidence, and comfort, as well as negative ones, such as aggression, hostility, dominance, conflict, power, and selfishness (Rogoza et al., [2018](#)). While considering some of the remarkable traits of a successful entrepreneur, the internal locus of control, need for success, tolerance of risk, and entrepreneurial intention are considered as proportions of personality traits (Karabulut, [2016](#)). When examining the connection between narcissism and entrepreneurial intention, individuals with narcissistic traits possess the capacity to establish dominance and gain social recognition, which can only be accomplished through strong entrepreneurial aspirations. As a result, they can overcome unconventional and difficult challenges, earning a reputation for their exceptional abilities (Baldegger et al., [2017](#)). Moreover, narcissistic characteristics are essential for boosting entrepreneurial education, which addresses poverty and unemployment in the economy. According to the study, these psychological traits can significantly impact entrepreneurial behaviors and intentions (Salameh et al., [2022](#)).

According to the study, a narcissistic personality can significantly impact the entrepreneurial intention among college and university students mediated by entrepreneurial self-efficacy (Gao & Huang, [2022](#)). Narcissists in university and college students may play a significant role in entrepreneurship success through overwork and social identity (Gubik & Vörös, [2023](#)). The role of narcissism in producing high entrepreneurial motivation is also prominently associated with high chances of productive outcomes, as their desire to own higher statuses is a type of self-parsing dominant trait, which helps them gain confidence in how to give novel ideas when competing with non-narcissistic entrepreneurs. Therefore, their self-motivated behavior puts them on high pedestals of successes brought about by their confident and positive self-attentive nature (Grijalva & Harms, [2014](#)).

Lastly, entrepreneurs are said to be self-efficient, which helps them to

put forward desired outcomes as self-efficacy and the ability to high business ownership are directly related to each other (Gielnik et al., [2020](#)). Self-efficacy is defined as the study of a person who has faith in being able to be a source of an incident and can perform a more active and self-determined life passage (Cole, [2022](#)). Entrepreneurial self-efficacy and narcissism are two primary factors that are considered crucial in industrial entrepreneurs. People with high self-efficacy set more challenging goals and stick to their objectives.

The previous studies have overlooked the role of narcissism in shaping entrepreneurial desires among young students (Botha & Sibeko, [2024](#)). However, there is a limited amount of current research or literature that particularly examines the connection between narcissism and entrepreneurial characteristics, such as self-efficacy, entrepreneurial goals, and entrepreneurial motivation in a comprehensive and detailed manner.

To address this gap, the current research has proposed several objectives in order to assess the correlation between narcissistic students and entrepreneurial traits. Specifically, it aims to determine whether there is a relationship between the two variables, namely narcissism in students and entrepreneurial traits.

Entrepreneurship education holds significant importance, among other aspects of entrepreneurship. Based on the existing evidence, narcissism plays a significant role in generating strong entrepreneurial motivation, which is closely linked to a greater likelihood of achieving positive outcomes. This is because the desire to attain higher social positions reflects dominating self-centered characteristics. These characteristics enable narcissistic students to develop self-assurance in presenting innovative ideas as compared to non-narcissistic students. Furthermore, the self-centered student's intrinsically driven conduct elevates them to great heights of achievement due to their assured and self-focused disposition (Grijalva & Harms, [2014](#)). However, the entrepreneurship education program was found to be often surprisingly ineffective while targeting the adult population, for example university students (Oosterbeek et al., [2010](#)). Therefore, the current study will provide empirical evidence to find the hypothetical relationship between narcissism and entrepreneurial traits.

Literature Review

Narcissism and Entrepreneurial Intention

Narcissism is described as a grandiose self-conception, driven by a need for entitlement and power (Miller & Campbell, 2008). It is a personality feature with two aspects, namely vulnerability and grandiosity (Miller et al., 2021). Several researchers have connected narcissism to significant developments and effects in daily life, such as performance at work, decision-making, and unethical behavior (Miller et al., 2021). Individuals with a high level of narcissism are frequently focused on achieving success and power and are not frightened of failure. Furthermore, riskier activity can result in bigger profits; therefore, narcissists are more likely to take risks or make higher-risk financial investments than non-narcissistic persons (Foster et al., 2011). Individuals with high narcissism often view themselves as brilliant and handsome, seek adoration and superiority, and strive for leadership positions for increased rewards and success through risk. Meanwhile, ambition and self-drivenness, and leadership are significant characteristics among entrepreneurs.

As entrepreneurship can better meet narcissists motivating demands, it might attract narcissistic persons more than other employment possibilities (Mathieu & St-Jean, 2013). The adjustable characteristic of narcissism, that is authority/leadership, is most frequently related to entrepreneurship and the associations between entrepreneurship and narcissism are primarily direct (Leung et al., 2021). Narcissism significantly impacts new ventures, for example entrepreneurial with the association of overwork and entrepreneurial social identity (Gubik & Vörös, 2023). Therefore, individuals with narcissistic traits are more likely to adopt fast-paced strategies and adapt to ambiguous situations to pursue an entrepreneurial career (Cai et al., 2021). Following is the hypothesis formulated in the light of the above discussion.

H₁: Narcissism has a significant impact on entrepreneurial intentions among university students.

Narcissism and Entrepreneurial Motivation:

According to researchers, various entrepreneurial and intrinsic motivations, including the desire to reduce risk exposure, might lead entrepreneurs to seek portfolio entrepreneurship (owning many enterprises at the same time) or serial entrepreneurship (starting a new venture after

closing or exiting a previous one (Cruz & Justo, [2017](#)). Research indicates that narcissistic persons exhibit higher levels of entrepreneurial motivation and are distinct from non-narcissistic individuals in their perception of greater earnings resulting from riskier behaviors. The presence of arrogance, rather than confidence, appears to impact the ability of individuals with narcissistic features to accurately assess and take risks (Mathieu & St-Jean, [2013](#)). Narcissist characteristics build and encourage entrepreneurial dynamics among the students in business domain.

A study was conducted on the relationship between entrepreneurial motivation, narcissism, and task disputes in student teams creating a business. The study provided insights into how narcissism is linked to task disputes and its impact on business success in student groups. The acceptance of this association is enhanced by the inclusion of students' narcissism as a mediator. By combining the principles of human capital theory, this association strengthens the positive aspects of narcissism, particularly its association with entrepreneurial competency. This, in turn, facilitates the transformation of task disputes into positive outcomes (Kollmann et al., [2019](#)). Following is the second hypothesis proposed by the current research.

H₂: Narcissism has a significant impact on entrepreneurial motivation among university students.

Narcissism and Self-Efficacy

Self-efficacy is one of the most potent predictors of motivational success virtually in any endeavor along with goals. Self-efficacy can help people with chronic conditions to improve their outcomes (Wu et al., [2016](#)). There are many types of narcissism (grandiose, covert, malignant), where grandiose narcissism combines positive traits, such as assertiveness, self-efficacy, fascination, communicative abilities, high self-assurance, and comfort, as well as negative traits, such as aggression, antipathy, dominance, argumentativeness, power-seeking, and selfishness (Rogoza et al., [2018](#)). Narcissism plays a noteworthy part in enlightening entrepreneurial objectives, even after prevailing for self-efficacy and locus of control (Mathieu & St-Jean, [2013](#)). In addition, narcissism significantly influences the development of entrepreneurial goals, even after considering factors, such as self-efficacy, locus of control, and risk propensity (Mathieu & St-Jean, [2013](#)). Previous studies have demonstrated that entrepreneurs

exhibit higher levels of narcissism compared to executives. Narcissistic students exhibit a higher propensity for risk-taking compared to non-narcissistic individuals, since they see greater benefits arising from risky behaviors. In this regard, following hypothesis is developed. The TPB stressed the relation between narcissism and self-efficacy. TBP has three main parts, which are attitudes, subjective norms, and perceived control behavior that creates an impact on intention. Narcissism is a self-praising, self-importance feeling, that enhances the perceived control behavior by increasing self-efficacy, the confidence of one to do activities effectively. Empirically, data (e.g., $\beta = 0.311$) supports this approach and enlightens the common relevance of self-efficacy in converting narcissistic characteristics into a venture goal (Entrepreneurial Goals).

H₃: Narcissism has a significant impact on self-efficacy among the university students.

Self-efficacy and Entrepreneurial Intentions

Several studies have been conducted that resulted in the significant connection between self-efficacy and entrepreneurial intentions. Entrepreneurial self-efficacy has a considerable impact on students' entrepreneurial intentions, both directly and indirectly. Self-regulation facilitates the connection between students' entrepreneurial intention and self-efficacy. The ramifications of these findings for the fields of entrepreneurship education and research are thoroughly examined and analyzed (Pihie & Bagheri, [2013](#)). Entrepreneurial intention is strongly predicted by entrepreneurial self-efficacy when a strong perception of fit with entrepreneurship is achieved, and entrepreneurial intention will be low if one perceives a low level of self-efficacy (Hsu et al., [2019](#)). The biggest and best factor influencing students' desire to start their businesses is how confident they feel about their entrepreneurial abilities. More specifically, students' entrepreneurial ambition is significantly impacted both directly and indirectly by entrepreneurial self-efficacy. Additionally, self-control affects the relationship between students' entrepreneurial self-efficacy and entrepreneurial intention (Pihie & Bagheri, [2013](#)).

The relationship between self-efficacy and entrepreneurial intention is found to be influenced both directly and indirectly. Furthermore, data indicated that entrepreneurial attitude could mediate the relationship between entrepreneurial self-efficacy and entrepreneurial intention. These

findings suggest that personal talents can be used in a variety of ways to promote entrepreneurship and play a critical role in understanding the theory of planned behavior (Rosique-Blasco et al., [2018](#)).

H4: Self-efficacy has a significant impact on entrepreneurial intentions among university students.

Entrepreneurial Motivation and Entrepreneurial Intentions

A study conducted by Raza et al. ([2018](#)) examined the correlation between entrepreneurial motivation and entrepreneurial intention. The findings indicated that entrepreneurial desire had a notable and beneficial effect on both entrepreneurial intention and all three factors that come before it. Entrepreneurial intention and perceived behavioral control exerted the greatest influence on attitudes towards initiating a firm, whereas entrepreneurial motivation had the least significant effect. These findings indicate that the development of entrepreneurial intention is greatly impacted by entrepreneurial desire. According to Solesvik ([2013](#)) who has studied the link between entrepreneurial motivation, entrepreneurial intention, and the antecedents of entrepreneurial intention. Additionally, Malebana ([2021](#)) revealed that entrepreneurial drive had a strong beneficial influence on entrepreneurial intention.

Studies indicate a high and positive correlation between students' level of entrepreneurial ambition and motivation. Social norms, subjective norms, and attitudes toward behavior are factors that influence an individual's motivation to become an entrepreneur. Social norms refer to how others value and encourage the establishment of a new business. Subjective norm relates to an individual's perception of their abilities and tolerance for entrepreneurial tasks. Attitude towards behavior refers to an individual's awareness of the importance and value of entrepreneurship. These factors collectively influence an individual's career intention to become an entrepreneur. The student's inclination toward becoming an entrepreneur, both now and in the future, is closely linked to their perception of risk tolerance and their attitude toward the attractiveness of self-employment (Antonioli et al., [2016](#)).

H5: Entrepreneurial motivation has a significant impact on entrepreneurial intentions among university students.

Mediating Role of Entrepreneurial Motivation

Entrepreneurial motivation and the likelihood to engage in entrepreneurial activities are both significantly improved by a narcissistic personality. In other words, it was discovered that despite the stereotype and desirability of narcissism, it can have a positive impact on a person's intentions to start a business, which in turn has implications for the economy and society (Do & Dadvari, [2017](#)). However, narcissism shows a large and favorable influence on entrepreneurial drive, comparable to the findings of past research (Kraus et al., [2018](#)). The data obtained also indicated that narcissism motivates entrepreneurial intention in a positive and significant way. Although narcissism is a socially unwelcome trait that is frequently associated with dishonesty and manipulability, it may be advantageous in a business setting (Cai et al., [2021](#)).

H₆: Entrepreneurial motivation significantly mediates the relationship between narcissism and entrepreneurial intentions among university students.

Mediating Role of Self-Efficacy

The findings of a research on the relationship between self-efficacy, narcissism, and entrepreneurial intention examined the effects of several stable and person-specific entrepreneurial traits, including self-efficacy, risk tolerance, passion, optimism, creativity, and narcissism, along with other more malleable variables, such as entrepreneurial awareness, perceived entrepreneurialism, and entrepreneurial intention in a given situation (Roy & Das, [2022](#)).

The final entrepreneurial quality element, narcissism exerts its impact on self-efficacy by adopting an exaggerated perspective of other entrepreneurial traits, such as risk-taking, entrepreneurial intention, locus of control self-efficacy, and others. Healthy narcissism may enable people to keep focused on achievement and completion without the fear of failure (Roy & Das, [2022](#)).

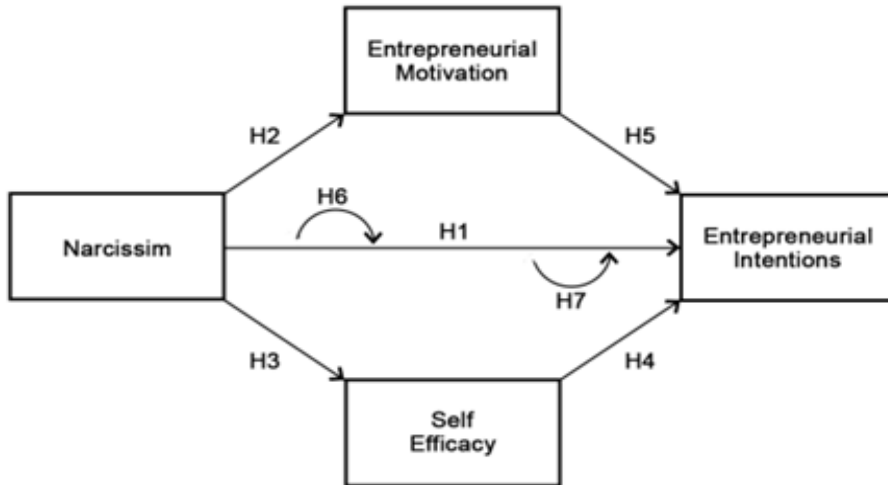
The results of these studies led to the development of the following hypothesis.

H₇: Self-efficacy significantly mediates the relationship between narcissism and entrepreneurial intentions among university students.

Conceptual Framework

Figure 1

Conceptual Framework



Methodology

The current research employed the positivist paradigm philosophy for the examination. This strategy is utilized when it is essential to precisely identify and assess the factors that influence the trajectory of a captivating phenomenon (Saunders, 2009). In keeping with the underlying assumptions of positivism, this study examines the connections between the concepts from an objective standpoint, assuming that this reality already exists (Creswell & Tashakkori, 2007). The deductive technique, which deals with the links between the primary constructions, was the fundamental way to do research employed in this study.

A quantitative method that investigated the relevance of links between the constructs was anticipated in terms of inquiry tactics. These tactics were established in response to the questions and objectives of study, as well as the philosophies that guided the research. According to Creswell and Tashakkori (2007) quantitative approach is significant as data obtained by using questionnaire turns out to be accurate.

Measurement Scales

Narcissism: For Narcissism, the Hypersensitive Narcissism scale was

used. The internal consistency reliability of the Narcissism scale was adequate for alpha was = 0.71. The Narcissism scale is a reliable and one-dimensional scale that consists of 10 items with a Likert scale. The components are simply combined to calculate the NS total score (Fossati et al., 2009). For narcissism, the measurements were adopted from the Ozgen and Baron (2007) with 10 items to examine the complex relationships (Cronbach's alpha: 0.83).

Entrepreneurial Intention: The items measuring entrepreneurial intention with six items were derived from (Liñán & Chen, 2009), having Cronbach's alpha 0.92. To analyze the intention for starting a business using the entrepreneurial intention model, the entrepreneurial intention questionnaire (EIQ), a Likert scale with five items was used for measuring.

Entrepreneurial Motivation: The parameter, measuring entrepreneurial motivation, was adapted from (Almobaireek & Manolova, 2013) with 11 items having Cronbach's alpha (0.82.) The study analyzed 11 entrepreneurial motives using binary items, such as monetary gain, independence, job creation, social status, flexibility, creativity, experience, accomplishment, control, and personal goal achievement.

Self-Efficacy: The four items measuring self-efficacy were adapted from (Maurer & Pierce, 1998) with Cronbach's alpha 0.86. There was a scale next to each Likert response, ranging from 1 (strongly disagree) to 5 (strongly agree). With neither agree nor disagree, the middle category was anchored.

Data Collection and Procedure

The sampling frame for this study consists of students enrolled in the business departments of higher educational institutions in Pakistan.

Data Collection: Data was collected from 766 participants using a questionnaire that was adopted from previous studies conducted from January to February 2022. Participants were selected based on inclusion and exclusion criteria and consent papers were provided. University students enrolled in a business program with entrepreneurship as a required or optional subject participated. The student had to be very prompt in pursuing entrepreneurial studies and have to complete it in one semester. Those who didn't complete the questionnaire and were not enrolled in the degree program to be eligible at the time or had unrelated credentials for business or entrepreneurship were excluded. This made an absolute accuracy of

demographics that the study was focusing on the interesting and relevant participants to the goals of the investigations.

Common Method Bias (CBM) was addressed through the various procedural and statistical methods. The poll was designed to exclude the social desirability bias by ensuring confidentiality and clear instructions. The correlation matrix demonstrated no extreme correlation between the variables, evidencing the absence of (CBM).

Data on variables, namely narcissism, self-efficacy, entrepreneurial goals, and motivation were collected manually.

Methods for Analyzing Data: The initial step of data screening includes visually inspecting the data to identify any abnormalities within the dataset, examining for any missing data and doing tests to identify any breaches of statistical assumptions, such as normality (Kline, [2012](#)). The study utilized IBM SPSS Statistics version 26 and AMOS-26 to assess measurement and structural models, detecting no missing data, as explained in subsequent paragraphs on Structural Equation Modelling (SEM) and other models' correlation analysis, discriminant analysis, factor analysis, logistic regression, analysis of variance, and multiple regression (Hair et al., [2014](#)). The survey was designed with clear instructions and a balanced presentation of items to prevent any respondent bias. In addition, correlation matrix analysis indicated no extremely strong correlation between variables in the results, which alleviates the concerns.

Sampling Technique: This study employed a non-probability convenience sampling technique, in which respondents were selected based on convenience factor for getting the required responses. This method developed a much better understanding of the explorative research as this is a study, that examines the correction between the variables much more significantly than the exploration of the entire population.

Sample Size: Numerous theorists have suggested various sample sizes as appropriate for the study, but no universal norm is in place (Baryman, [2012](#); Bryman, [2016](#)). A sample size greater than 200 is acceptable and appropriate in social science investigations. The sample size can be chosen in various ways. After adding predictors to the programmer, the G power 3.1 said that our study's sample size was 100. According to this method, the reasonable sample size for the current research is 766.

Results

To ensure the validity and reliability of the data, several methods and statistical analyses were employed. In this regard, the study rigorously tested the assumptions outlined previously (Hair et al., 2014). To evaluate the homoscedastic, residual scatterplots were tested and the consistent variance of residuals. Linearity was examined through the scatterplots, which demonstrated linear relationships between the independent and dependent variables.

Demographic characteristics data was collected on controlled variables named as a university, age, degree, scientific area, and professional experience. Details of the data collected are given in Table 1.

Table 1
Demographic Results

	Demographical Description	Frequency	Percentage
University	University of Lahore	196	25.6
	GIFT University	187	24.4
	University of Gujrat	191	24.9
	University of Sialkot	192	25.1
Age	< 20 Years	163	21.3
	20 - 25Years	584	76.2
	26 - 30Years	15	2
	> 30 Years	4	0.5
Degree	Bachelor's/Graduation	654	85.4
	Master	85	11.1
	Postgraduate	23	3
	PhD	4	0.5
Scientific Area	Life Sciences and Health	175	22.8
	Exact Sciences and Engineering	255	33.3
	Natural and Environment Sciences	34	4.4
	Social Sciences and Humanities	302	39.4
Professional Experience	No Professional Experience	517	67.5
	< 1 Year	144	18.8
	1-3Year	79	10.3
	> 3 Years	26	3.4

Descriptive statistics of the respondents are given in Table 2. It includes mean, standard deviation, and correlation matrix.

Table 2
Means, Standard Deviations, and Correlation Matrix

	<i>M</i>	<i>SD</i>	EI	EM	SE	NS
EI	4.8279	1.35310	1			
EM	5.3869	1.09096	.564**	1		
SE	3.8746	0.60879	.473**	.623**	1	
NS	3.5833	0.56694	.132**	.182**	.213**	1

All values of correlation are positive. Hence, it is evident that the relationship between all variables is positive. A positive relationship means that when one variable is increasing, the other variable also increases in the same direction. For the strength of the relationship criteria are used. A value of *r* ranging from 0.3 to 0.7 indicates a moderate correlation between the variables. A correlation coefficient (*r*) greater than 0.7 indicates a robust link between the variables. The correlation between narcissism and entrepreneurial goals, entrepreneurial motivation, and self-efficacy is established as weak but favorable, with correlation coefficients of *r* = 0.132, 0.182, and 0.213, respectively. Therefore, the results support the hypotheses, as the orientations and intensity of the correlations between the variables are consistent.

In addition, the weak coordination between narcissism and entrepreneurial traits (*r* = 0.182) argued that self-efficacy is more significantly impacting than narcissism. The results are understandable, suggesting a coordinated combination of these traits led to the entrepreneurs success in the venture.

Table 3
Reliability of Study Variables

Variables	Cronbach's Alpha
EI	0.878
EM	0.897
SE	0.826
NS	0.842
Overall	0.909

Internal reliability is to check that a scale being used for measuring the concept is reliable for measuring that concept. According to the Hair et al. (2013) value of Cronbach's alpha have some range of acceptability, its value should be ≥ 0.70 to validate construct. It is clear from the above-mentioned table that all values of Cronbach's alpha are well above the criteria mentioned, which is 0.70. The value of Cronbach's alpha for entrepreneurial intentions is 0.878, for entrepreneurial motivation 0.897, for self-efficacy 0.826, for narcissism 0.842, and the overall value is 0.909. The scales used for measuring the variables are reliable. Hence, this questionnaire is reliable for conducting this study.

Measurement Model

According to Hair et al. (2013) measurement model explains the relationship between constructs and their items. There are three important parts of it, namely convergent validity, internal consistency, and discriminant validity.

Convergent validity means that constructs are error-free and they are measuring what they have to measure (Fornell, 1981). Convergent validity is measured by Ave. The threshold value of AVE is 0.5 and higher (Fornell, 1981). According to Table 4, convergent validity is established. All the values of AVE are well above the aforementioned criteria. For example, the value of AVE for entrepreneurial intentions is 0.553. The same is the case with other variables.

Table 4

Convergent Validity

Latent Variables	AVE
EI	0.553
EM	0.528
SE	0.512
NS	0.514

As per the findings of Table 5, it is clear that internal consistency is established. The CR values for all variables are well above the aforementioned criteria for example, the CR value for entrepreneurial intentions is 0.879. Same is the case with the rest of the variables.

Table 5
Composite Reliability

Latent Variables	Composite Reliability
EI	0.879
EM	0.917
SE	0.733
NS	0.838

The very first criterion to check the outer model is internal consistency, which is checked by composite reliability and its threshold value 0.7 (Hair et al., 2013).

The purpose of factor loading is to identify those items that are uncorrelated with the given construct, so that such items can be excluded. The criteria for retaining a factor in a construct were determined by (Netemeyer et al., 1995). The results of the factor loading are given in Table 6. These are the items that have a value higher than 0.5.

Table 6
Factor Loading

Factor	Items	Estimates	Factor	Items	Estimates
Entrepreneurial Motivation	EM 1	0.505	Entrepreneurial Intentions	EI 1	0.598
	EM 3	0.679		EI 2	0.637
	EM 4	0.722		EI 3	0.842
	EM 5	0.682		EI 4	0.845
	EM 6	0.757		EI 5	0.810
	EM 7	0.761		EI 6	0.691
	EM 8	0.798		SE 3	0.750
	EM 9	0.820		SE 4	0.773
	EM 10	0.675		SE 5	0.770
	EM 11	0.810		SE 6	0.801
	Narcissism	NS 5		0.618	Self-Efficacy
NS 6		0.612	SE 9	0.845	
NS 7		0.755	SE 10	0.803	
NS 8		0.780	SE 11	0.778	
NS 9		0.768			
	NS 10	0.659			

Discriminant validity refers to what extent a test is truly different from the other test (Hair et al., 2017). Discriminant validity is established when

the square root of the AVE of each variable is higher than the values that are present on the left triangle.

Table 7
Discriminant Validity

Latent Variables	EI	EM	SE	NS
EI	0.778			
EM	0.143***	0.746		
SE	0.262***	0.178***	0.721	
NS	0.206***	0.242***	0.559***	0.718

Hypothesis Testing

The first hypothesis of the study is narcissism has a significant impact on entrepreneurial intentions. Significant p value is confirming that H_1 is accepted. It means that narcissism has an impact on the entrepreneurial intentions of university students. p value for H_2 is significant too and, hence confirms the hypothesis. It means that narcissism has an impact on the entrepreneurial motivation of university students. According to H_3 , narcissism has a positive impact on the self-efficacy of the students; therefore, this hypothesis is approved as the p -value is significant. Similarly, self-efficacy has a positive impact on the entrepreneurial intentions of university students. Entrepreneurial motivation has a positive impact on entrepreneurial intentions as the p -value for this hypothesis is significant as well.

Table 8
Hypothesis Testing

Hypothesis	Relationship	β	<i>S.E.</i>	<i>C.R.</i>	p	Results
H1	NS → EI	0.158***	0.022	7.445	0.000	Supported
H2	NS → EM	0.296***	0.051	5.977	0.000	Supported
H3	NS → SE	0.311***	0.043	7.371	0.000	Supported
H4	SE → EI	0.538***	0.038	13.731	0.000	Supported
H5	EM → EI	0.741***	0.062	11.645	0.000	Supported

Mediation Analysis

The model consists of two mediations. The hypothesis suggests that entrepreneurial desire plays a role in mediating the connection between narcissism and entrepreneurial goals. The data from Table 9 indicates that

entrepreneurial motivation is acting as a mediator in the connection. The condition for verifying mediation is that there must not be a zero value between the upper and lower bounds. Both values must have the same sign, either positive or negative. Both values in this situation are positive; therefore, validating the mediation between the specified variables. The same applies to H7. The values of the upper and lower bounds confirm the mediating role of self-efficacy in the relationship between narcissism and entrepreneurial intention.

The result of the above analysis showed that entrepreneurial motivation mediates the bonding between narcissism and entrepreneurial intention ($\beta=0.266$, 95% CI: (0.202, 0.344) and self-efficacy also mediates the connected relation ($\beta= 0.12$, 95% CI (0.202, 0.344). All these analyses and mediators illustrated the partial mediation and direct effect of the variables are significant. The above results and analysis ensured that self-efficacy and entrepreneurial motivations are the key mechanisms for linking narcissism and entrepreneurial intention.

Table 9
Structural Model

Hypothesis	Relationship	β	LB	UB	Results
H6	NS \rightarrow EM \rightarrow EI	0.266	0.202	0.344	Supported
H7	NS \rightarrow SE \rightarrow EI	0.124	0.09	0.163	Supported

Discussion

The study examined the impact of Narcissism on entrepreneurial qualities among 766 university students aged 20-25 with 85.4% having a bachelor's degree and a strong understanding of topics. It assessed independent, dependent, and mediating factors.

Narcissism and Entrepreneurial Intention

To examine the effect of narcissism on entrepreneurial intention, (H₁) was tested. It was proposed that narcissism significantly affects the intentions of entrepreneurs.

H₁: Narcissism has a significant impact on entrepreneurial intentions among university students.

The results suggested that there is a positive relationship between narcissism and entrepreneurial intention. This is supported by the B-value

of 0.158, which indicates a significant impact of narcissism on the entrepreneurial intention of university students. Therefore, H_1 is confirmed. This conclusion is corroborated by prior scholarly works. The variable trait of narcissism, namely in terms of power and leadership, is commonly associated with entrepreneurship. Moreover, the connections between entrepreneurship and narcissism are predominantly direct (Leung et al., [2021](#)). The conclusions validated the fact that Narcissism has a positive and significant effect on promising entrepreneurial intention.

Relationship between Narcissism and Entrepreneurial Motivation

The study's second hypothesis suggested that there is a positive relationship between narcissism and entrepreneurial intention. This is supported by the β -value of 0.158, which indicates a significant impact of narcissism on the entrepreneurial intention of university students. Therefore, H_2 is confirmed. The variable trait of narcissism, namely in terms of power and leadership, is commonly associated with entrepreneurship. Moreover, the connections between entrepreneurship and narcissism are predominantly direct (Mathieu & St-Jean, [2013](#)).

H₂: Narcissism has a significant impact on entrepreneurial motivation among university students.

Relationship between Narcissism and Self-Efficacy

When observing the relationship of narcissism with self-efficacy, it was found as positive with a β -value of 0.311. According to the third hypothesis, narcissism has a positive impact on the self-efficacy of the students. This hypothesis is approved as the p -value is significant. This finding is supported by previous literature. Therefore, narcissism and unpleasant (counterproductive) conduct are associated with this condition. Since narcissists typically see themselves as victims. They detect negative intent when interacting with others, making them sensitive to interactions that could lead to self-efficacy in narcissists who then act in ways that are counterproductive at work (Brender-Ilan & Sheaffer, [2019](#)). The current findings are congruent with research undertaken to investigate the role of narcissism in entrepreneurship, which found that student entrepreneurs are more narcissistic than non-entrepreneurs. Also, it was declared that narcissism was positively related to high levels of general self-efficacy (Hegde & Shetty, [2020](#)).

H₃: Narcissism has a significant impact on the self-efficacy among the

university students.

Relationship between Self-efficacy and Entrepreneurial Intention

Understanding the relationship between self-efficacy and entrepreneurial intention in the current sample was one of the goals of this research, which led to the hypothesis that people with self-efficacy do have the traits of entrepreneurial intention.

H₄: Self-efficacy significantly impacts the entrepreneurial intentions among the university students.

The study examining the relationship between self-efficacy and entrepreneurial ambitions found a moderate positive correlation, with a β -value of 0.538. Additionally, the p -value supports the hypothesis that self-efficacy has a favorable impact on entrepreneurial goals among university students. This conclusion is corroborated by prior scholarly works. The correlation between self-efficacy and entrepreneurial intention is observed to be impacted both directly and indirectly. Moreover, the findings suggested that having an entrepreneurial mindset could enhance the connection between self-confidence and the goal of becoming an entrepreneur. Hence, the findings indicated that individual abilities can be utilized in many ways to promote entrepreneurship and have a significant impact on comprehending the theory of planned behavior (Rosique-Blasco et al., [2018](#)).

Relationship between Entrepreneurial Motivation and Entrepreneurial Intention

The β -value of 0.741 suggests a moderate positive connection between entrepreneurial motivation and entrepreneurial ambitions. Therefore, it can be concluded that entrepreneurial motivation has a strong positive influence on entrepreneurial aspirations, as indicated by the significant p -value for this hypothesis. The findings align with prior studies as indicated below.

Entrepreneurial motivation had a strong positive influence on all three antecedents of entrepreneurial intention (proactivity, innovation, and opportunism), as well as on entrepreneurial intention itself. Entrepreneurial intention and perceived behavioral control exerted the greatest influence on attitudes towards initiating a firm, whereas entrepreneurial motivation had the least significant effect. The impact on subjective standards was minimal. These findings indicated that the development of a desire to become an

entrepreneur is greatly affected by the drive to engage in entrepreneurial activities. The findings are consistent with those of Tsai et al. (2016) who observed a favorable link among entrepreneurial motivation, entrepreneurial intention, and the antecedents of entrepreneurial intention. Additionally, Raza et al. (2018) revealed that entrepreneurial drive had a strong beneficial influence on entrepreneurial intention (Malebana, 2021).

H₅: Entrepreneurial motivation significantly impacts the entrepreneurial intentions among university students.

Relationship between Entrepreneurial Motivation, Narcissism, and Entrepreneurial Intention

The study found a positive relationship between narcissism and both entrepreneurial motivation and entrepreneurial intentions, with a β -value of 0.266. This finding is corroborated by the aforementioned literature.

Individuals with narcissistic personality traits see a notable enhancement in their drive to become entrepreneurs and are more inclined to engage in entrepreneurial endeavors. Contrary to the negative perception and unpopularity of narcissism, it was discovered that narcissistic traits can have a positive effect on an individual's motivation to establish a business, which in turn has significant economic and societal consequences (Do & Dadvari, 2017).

Moreover, the data suggested that narcissism has a favorable and substantial effect on motivating entrepreneurial intention. While narcissism is a socially hostile quality that is typically regarded to be related to manipulability and dishonesty, it might be advantageous in a commercial context (Cai et al., 2021).

H₆: Entrepreneurial motivation significantly mediates the relationship between narcissism and entrepreneurial intentions among university students.

Relationship between Self-Efficacy, Narcissism, and Entrepreneurial Intention

As per the results, the β -value of 0.124 confirms the mediation of self-efficacy between narcissism and entrepreneurial intentions. It is supported by the given literature which also states that the impact of several stable and individual-specific entrepreneurial qualities (self-efficacy, risk tolerance, passion, optimism, achievement orientation, creativity, and narcissism)

together with other comparatively flexible factors, namely entrepreneurial awareness, perceived entrepreneurialism, and the entrepreneurial intention in a single hypothetical model (Roy & Das, [2022](#)).

The final entrepreneurial quality element, narcissism (Grijalva et al., [2015](#)) exerts its impact on self-esteem by adopting an exaggerated perspective of other entrepreneurial traits, such as risk-taking, entrepreneurial intention, locus of control self-efficacy, and others. Healthy narcissism may enable people to keep focused on achievement and completion without the fear of failure (Roy & Das, [2022](#)).

H7: Self-efficacy significantly mediates the relationship between narcissism and entrepreneurial intentions among university students.

Conclusion

In Conclusion, the study has contributed in the body of knowledge significantly, how narcissism influences entrepreneurial traits (entrepreneurial intention, drive and self-efficacy) among the university students. The results present that, when well-managed, organized narcissism may have significant impact on business goals and actions; however, the mediating and moderating elements e.g. self-efficacy and entrepreneurial motivation must also be taken into account.

To avail a in-depth understanding of how narcissistic traits change and influence entrepreneurial endeavors over time, future research should continue to examine such kind of links in variety of demographic and context using longitudinal studies and more extensive sampling methodologies.

Theoretical Contributions

This research offered valuable insights and contributions to the understanding of narcissism and its impact on entrepreneurial traits, specifically through the mediation of entrepreneurial intention and entrepreneurial motivation among university students. The study introduced accurate and dependable definitions of key concepts, such as narcissism, entrepreneurial intention, entrepreneurial motivation, and self-efficacy. Additionally, the research built upon previous studies that have explored the relationship between narcissism and various entrepreneurial variables. However, there is a dearth of comprehensive studies examining the influence of these characteristics on the motivational growth of

entrepreneurial students, particularly in terms of presenting actual evidence. The proposed conceptual model enhanced the comprehension of the direct and indirect connections between the constructs, which can be utilized in comparable studies to explore analogous interactions.

Career choice theory (Holland, [1997](#)) and person-environment fit theory (Judge & Kristof-Brown, [2004](#)) stipulated that individuals choose careers and work environments that best fit their values, needs, and personality. Thus, the research supports the idea that this theory offers a theoretical foundation for predicting entrepreneurial motivation and EI in individuals having narcissistic traits. In addition, narcissism (dark triad personality traits) is crucial for developing, honing, and nurturing one's innate abilities in a way that makes one more optimistic and willing to take risks to realize one's entrepreneurial intentions.

Practical Contributions

When teaching entrepreneurship education, it is important for business school lecturers to not only emphasize proactive personality traits or the big five personality models but also to provide explanations on narcissism and the dark triad personality traits to their pupils. Previous research has demonstrated that narcissism positively influences entrepreneurial intention. Therefore, university administration should guide students based on their intellectual abilities and personality qualities. The study has also concluded that narcissistic personality characteristics positively impact entrepreneurial intention; consequently, the management of the university should coach the students in keeping with their mental ability and personality traits (Zia et al., [2020](#)).

Typically, students who possess a narcissistic personality tend to have a stronger inclination towards starting their own business. Therefore, teachers should pay attention to students who display high levels of narcissism or psychopathy, educate them, and implement targeted measures to reduce these traits. By doing so, it will contribute to fostering their entrepreneurial intention. Furthermore, once obtaining their degrees, students must receive focused support from the university administration to equip them with the necessary skills and knowledge to effectively join the job market with innovative company ideas. Educators need to provide support and create an environment that enables students to start their enterprises and generate income to sustain themselves and their families.

Limitations and Future Implications

Initially, the data was gathered using a deductive survey approach, which means that the perceptions related to the concepts were assessed at a specific moment. Still, it is important to note that the circumstances and factors can vary over time. Therefore, a more comprehensive comprehension of the constructs under investigation could be attained by employing a longitudinal research approach.

Furthermore, this study mostly utilized Likert scales and questionnaires, indicating that the findings are predominantly derived from the participants' subjective evaluations. Although earlier studies have shown a strong association between objective and subjective performance indicators, it would be valuable to collect primary data not only from a limited number of universities in Pakistan but also from a wide range of economic sectors. Additionally, it is crucial to incorporate many other moderating or mediating elements, such as elevated self-esteem and enhanced decision-making abilities, among others.

Conducting longitudinal studies that specifically examine this causal pathway might be beneficial in gaining a deeper understanding of how entrepreneurial tendencies develop and change over time. It is possible to do comparative investigations of the same causal model in various nations. In addition, future research should include a range of characteristics associated with entrepreneurial activity, as well as broader macro-level concerns. Given the small sample size and limited scope of this study, it is advisable to investigate the relevant variables on a larger scale, such as at an international level, to reduce the constraints imposed by these limitations.

Another limitation of the study is that convenience sampling may fail to advance the entire range of entrepreneurship, highlighting the results that are not representative of all entrepreneurial cultures. Future studies are quite possible to solve the equation by using the probability sampling technique (Stratified sampling), which provides more representative samples and improves the generalizability. Furthermore, studies might repeat this research across different demographical situations to confirm and extract the findings.

A potential future study might investigate the influence of narcissism on entrepreneurial inclinations by doing a comparative assessment of clinical

and non-clinical groups. An alternative strategy could be extending the concept of narcissism beyond the realm of initiating and managing a firm to encompass corporate entrepreneurship and the context of established organizations. Ultimately, the presence of dual narcissism can potentially influence the creative and innovative behavior of engineers in the fields of development and research.

Ultimately, this research has demonstrated that the model it proposes provides a clearer understanding of the relationship between narcissism and entrepreneurial tendencies by considering the influential mediators involved with the study. Another limitation is the self-reported possibility of introducing data biases, for example social desirability and recall error. Future research should address this through multiple data sources, such as peer evaluations and understanding the entrepreneurial traits and intentions.

Finally, these above-mentioned weak correlation relations might be impacted by confounding constructs, such as cultural norms and socioeconomic conditions. For more in-depth study on the impact of narcissism on entrepreneurial traits, future studies should take on board these factors.

Data Availability Statement

The data supporting the findings of this study will be provided by the corresponding author upon reasonable request.

Conflict of Interest

The authors of the manuscript have no financial or non-financial conflict of interest in the subject matter or materials discussed in this manuscript.

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