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ARTICLE

Exploring the Relation Between Personality, Career Anchoring, Training, and Entrepreneurship

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Abstract

The association between personality traits, training in business ideation, career anchoring, and entrepreneurship is examined in this study. Independent Sample t-test and one-way ANOVA were performed statistically using IBM-SPSS Statistics 20. Using a convenience sample, participants were chosen from online forums, incubators, and entrepreneur education programs. The study shows how personality affects entrepreneurship, how training affects entrepreneurship readiness, and how career anchors play a part in career choices. Additionally, it emphasizes the many phases of business conceptualization and how they affect budding entrepreneurs. For educators, career counselors, and legislators interested in promoting entrepreneurship, these findings are pertinent. This research advances our knowledge of the intricate entrepreneurial ecosystem and identifies potential directions for future studies and programs to encourage entrepreneurship and career advancement.

Keywords: Entrepreneurship, Entrepreneurial Training, Business Ideation, career-anchoring.

1 Introduction

Entrepreneurship has increasingly been recognised as a key driver of economic and social development, contributing significantly to wealth creation, job generation, and innovation. Scholars such as Baron and Shane (2007) have described entrepreneurs as the "engines of economic progress", while others like Hatten (1997) and Holt (1992) highlight their impact on both economic and social structures. The link between entrepreneurship and national development is evident in many economically advanced nations, with research in countries like the United States reinforcing the positive correlation between entrepreneurial activity and economic growth. As global interest in entrepreneurship continues to rise, so too does the recognition of entrepreneurial education as a critical factor in shaping future innovators and leaders (Alberti et al., 2004).

This study adds a novel perspective by exploring the interplay between career anchoring, entrepreneurial training, and personality traits during the ideation phase of business creation. Unlike prior research that often examines these factors independently, this study adopts a multidimensional approach to understand their combined impact on entrepreneurial success. The findings have practical implications for designing more targeted training and career development programs, aligning individual traits and motivations with entrepreneurial goals. Moreover, by emphasizing not just venture initiation but also sustainability and long-term success, the study offers a holistic framework that can inform both policy and practice in entrepreneurship education and support.

2 Theoretical Background

2.1 Personality Traits & career anchoring

The environment around a person plays a vital role in shaping their personality. Roger (1959) to grow and self-actualise, a person needs an environment that provides openness, genuineness, and acceptance. According to him, for personality development, the immediate environment must be innovative.

McClelland (1961) connected the achievement motivation to entrepreneurship and economic development, however not all of these were found to have significant effects (e.g., Frey, 1984). In entrepreneurship research, achievement motivation has become the interest of individual business owners not more of the economic/societal level. It had become the personality theory, gaining its popularity in the early eighties.

Entrepreneurial personality traits were already incorporated into traditional economic theories. For example, Schumpeter (1935) developed the notions of innovativeness, accomplishment orientation, dominance, and other aspects of the entrepreneurial personality. According to Hayek (2019), knowledge and entrepreneurial discovery are the main drivers of economic development, while Knight (1921) defined entrepreneurship as taking risks in the face of uncertainty. After examining each of these economic theories, McClelland (1961) concluded that variations in the drive for accomplishment account for a country's economic prosperity. In the entrepreneurial setting, his theory received a lot of praise. There was no connection found between personality, starting a business, and success. Remarkably, one suggested that irrelevant qualities of the entrepreneurial mentality might have suppressed significant traits, leading to an underestimation of the genuine impacts rather than an overestimation (Tett, Steele, & Beaugard, 2003; Johnson, 2003). Furthermore, situational emergencies and mediating processes have been disregarded in all traditional studies. Research on entrepreneurship has historically had poor methodology (Low & MacMillan, 1988; Smith, Gannon, & Sapienza, 1989). It's also possible that the impact of personality traits is undervalued, like how power deficiencies in research are typically misinterpreted as proof against the premise.

Numerous other aspects of the characteristics of entrepreneurs have also been studied (Timmons, Smollen Dingee, 1985; Hornaday & Aboud, 1971). Throughout this investigation, no one characteristic that appeared to be the fundamental nature of an entrepreneur was found in the pertinent literature. The relationship between personality traits and entrepreneurship is contradictory and inconsistent, as evidenced by numerous reviews (e.g. Chell, Haworth, & Brearley, 1991; Cooper & Gimeno-Gascon, 1992; Gartner, 1989; Brockhaus & Horowitz, 1985; Davis Blake & Pfeffer, 1989). The personality approach was also criticized during this time. There were lots of disagreements. The first was that there was no theoretical support and the study on the entrepreneurs was entirely descriptive (Low & MacMillan, 1988). Narrative reviews provided negative outcomes. Recently, meta-analytic evidence (Collins, Hanges, & Locke, 2004; Rauch & Frese, 2004; Stewart & Roth, 2004) has been collected, challenging the narrative reviews of the 1990s. Owusu et.al. (2023) posited that there is a statistically significant correlation between personality traits and career choice.

(1) Factor O means Openness, open-mindedness, and originality; these mean some traits like, artistic (+), insightful (+), intelligent (+), commonplace (-), narrow interests (-), shallow (-).
(2) Factor C refers to Conscientiousness, control, and constraint; traits that are included in this factor are deliberate (+), efficient (+), precise (+), careless (-), frivolous (-), irresponsible (-).
(3) Factor E means extraversion, energy, and enthusiasm; traits included are adventurous (+), sociable (+), quiet (-), reserved (-), retiring (-), and shy (-).
(4) Factor A means agreeableness, altruism, and affection: traits which defined them are cooperative (+), generous (+), sympathetic (+), cruel (-), quarrelsome (-), unfriendly (-).
(5) Factor N means neuroticism, negative affectivity, and nervousness; traits included are anxious (+), self-pitying (+), temperamental (+), calm (-), contented (-), and stable (-).

2.2 Big 5 Theory and Entrepreneurship

Initially, there were many more personality traits which were evidenced by the research made by Allport and Odbert (1936). They found about 4000 words that described personality traits (Ryckman 2000). Later Cattell (1943) decreased this set of words to 35 categories. Then Cattell (1945) reduced them to 12 factors. Norman (1967) found five basic factors. Goldberg (1981, 1990) identified the five big factors: surgency, agreeableness, conscientiousness, emotional stability, and intellect. The big five factors (relabeled so that the first letters of the five factors are OCEAN, see Costa and McCrae 1985) can be described as (John, 1990, in Carducvi 1998, p. 239):

A) Openness of the personality trait and career anchoring
Openness is very crucial to showing the relationship between entrepreneurship and personality (Howard and Howard 1995; Singh and De Noble 2003). It plays an important role in identifying entrepreneurial opportunities. An entrepreneur always seeks new opportunities and tries to work with them. The openness factor helps them to connect with it. Traits in openness are foresight, insight, and perceptivity (Goldberg 1990; Ryckman 2000).

B) Conscientiousness of the personality trait and career anchoring
Conscientious people tend to be efficient (Goldberg 1990; John 1990; Saucier 1994), deliberate (John 1990), organized and

systematic (Goldberg 1990; Saucier 1994), and practical (Saucier 1994). McClelland (1961) found that entrepreneurs (in comparison with the population) scored high for the need for achievement (the desire to do well).

C) Extroversion of the personality trait & and career anchoring

Extraverts people tend to be assertive and dominant (John 1990), active (Goldberg 1990), bold (Saucier 1994), and energetic (Goldberg 1990; Saucier 1994). Palich and Bagby (1995) discovered that entrepreneurs are more optimistic than non-entrepreneurs. Extroverts are cheerful, jovial, merry, and optimistic (Goldberg 1990). Extraversion may facilitate the achievement of the goals of a good leader. Howard and Howard (1995) found that an entrepreneurial person is highly conscientious and extroverted.

D) Agreeableness of personality traits & and career anchoring

The people with this factor in entrepreneurs can be in both directions. Some traits of agreeableness (Golberg 1990), like cooperative, helpful, patient, cordial, friendly, trustful, and diplomatic, are helpful, but on the other hand, traits like combative, harsh, bossy, demanding, domineering, manipulative, rude, and ruthless are on the negative side. Entrepreneurs can have these on both the bright and dark sides. If entrepreneurs have a high level of energy and obsession to succeed, then it can be destructive for the organization and the entrepreneur themselves.

E) Neuroticism of personality traits & and career anchoring

For personal success, personality must have emotional stability (Barrick, Mount, and Judge 2001; Rauch and Frese 2007), which can be the dark side of neuroticism factor (the reverse of emotional stability) and entrepreneurship. Singh and De Noble (2003) discovered the negative relationship between neuroticism and self-employment in terms of intent and perceived ability.

Biswas. A. et.al. (2023) posited that Apart from the agreeableness dimension of personality traits, the study finds that all other identified dimensions and entrepreneurial education had a significant impact on management students' intentions to pursue their entrepreneurial goals, with the need for achievement emerging as the most significant enabler. Of the Big Five Personality Traits, conscientiousness was the main factor that had a favorable impact on entrepreneurial inclinations, whereas neuroticism had a negative effect.

3 Entrepreneurial Training

Individual training and development have developed as a major educational enterprise over the past few decades. It is a process that provides conditions in which individuals gain knowledge, skills, or abilities. However, Entrepreneurial training has emerged as a major influence in entrepreneurship and venture development. Training is a well-organized opportunity for participants to acquire the necessary understanding and skills (Lynton & Pareek, 1967).

Training continuously includes learning experiences provided to an individual to bring about changes in behavior that promote the attainment of goals and objectives. Therefore, it is considered as an influential tool for an individual to attain knowledge and skills. Training is defined as a planned learning experience designed to bring about permanent changes in an individual's knowledge, attitudes, or skills (Campbell Dunnette, Lawler, & Weick,1970). It is required not only for improvement in individual knowledge and skills but to acquire behavioral skills also. Training may be defined as an experience, a discipline, or a regimen that causes people to acquire new, predetermined behaviors. (Johnsan-Laired, 1978). It helps an individual to perform his or her given job adequately by enhancing his or her ability to perform, skills, knowledge, and attitude.

Some people focus on only the personality traits and psychological characteristics that fit the entrepreneurs. They do not feel any necessity for the education of entrepreneurs. Bolton and Thompson (2004) said that talent and temperament are two examples of unteachable matters. However, practitioners, academicians, and policymakers tend to answer the old question "Can entrepreneurship be taught?" . Some facets can be taught for entrepreneurship. From an Ontological perspective, there are many definitions of entrepreneurial education training (EET) which show us different forms of teaching. According to Heinonen and Poikkijoki (2006), there are three objectives for Entrepreneurship Education and training: learn to understand entrepreneurship, learn to act in an entrepreneurial way, and learn to become an entrepreneur. Many researchers have agreed with this classification. Harris and Gibson (2008) said that to change the attitude towards entrepreneurship we must develop student-based education programs and further by educating about entrepreneurship we can change the main motive for this. Valencia. et.al. (2023) posited that the student's attitude towards entrepreneurship increases with the perception of an entrepreneurial culture and amount of training. It was also discovered that an entrepreneurial culture improves the university atmosphere, which in turn improves entrepreneurial education.

4 Career Anchoring

A person's life is defined by their career as a method to pinpoint their areas of interest, and long-term contributions, organize their experiences, and create standards for the type of work environment in which they will be judged (Schein, 1978). The theory of career anchors was created by Edgar Schein while he was a student at the Massachusetts Institute of

Technology (MIT) Slogan School of Business. According to his research, the "career anchor" is made up of three elements-
A) Self-perceived talents and abilities
B) Self-perceived motives and needs
C) Self-perceived attitudes and values (Schein, 1978)

Career anchoring talks about self-perceived talents & and abilities, self-perceived motives & and needs, and self-perceived attitudes and values. The self-concept or conception of self is a component of Rogers' personality theory. The phrase "the ordered, consistent set of perceptions and beliefs about oneself" is used to define this. According to Roger (1959), we want to feel, experience, and behave in ways that are consistent with our self-image and which reflect what we would like to be like, our ideal self. The experiences that are currently available to the human organism, both conscious and unconscious, are referred to as its "phenomenal field" (Rogers, 1959). A section of this field differentiates as growth takes place, and this becomes the person's "self" (Rogers, 1959). A key idea in this philosophy is the concept of the "self." It involves awareness of being and functioning and grows through interactions with other people. "The organized set of traits that the individual recognizes as peculiar to himself or herself" is the definition of the self-concept (Ryckman, 1993). It is heavily influenced by the social assessments he or she has received.

The study also emphasizes the value of entrepreneurial career anchoring in promoting self-cultivation and new graduates as a source of entrepreneurship. Their research broadens the corpus of knowledge on global HRD. This is accentuated by gender and in-group collective values. These findings have implications for international HRD education as well as for the development of aspiring graduates.

As in literature, both the career anchoring & and self-theory of personality talk about the "self". However, McClelland (1940) stated that the need for achievement is a desire to do well, not so much for the sake of social recognition of prestige, but for the sake of an inner feeling of personal accomplishment.

5 Business Ideation Stage of Entrepreneurship

In the ever-evolving landscape of entrepreneurship, the journey toward creating a successful business begins with a spark of inspiration (Blank, 2013). This initial concept, the kernel of innovation, is the cornerstone of what will eventually become your business.

The business ideation process is the birthplace of creativity, where abstract ideas take tangible form, and aspirations are transformed into actionable plans (. It's a thrilling journey that involves exploring uncharted territories, identifying market opportunities, and crafting solutions to address pressing needs. This method captures the spirit of entrepreneurship from the conception of an idea to the full-fledged blueprint of a firm. Throughout this journey, you will encounter obstacles to your critical, creative, and strategic thinking. To refine your idea and make it into a viable business proposal, you will carry out competitive landscape, market research, and customer needs analysis. It's a process that requires perseverance, flexibility, and a sharp understanding of the ever-changing corporate landscape. From identifying your passion and target market to conducting in-depth market research and creating an engaging value proposition, every stage is essential to transforming your idea into a profitable business (Blank & Dorf, 2012).

By offering strategies, tactics, and practical guidance, this guide aims to be your traveling companion to help you navigate the business ideation process successfully (Eisenmann et al., 2011). The information and abilities you will get from this process will be priceless, regardless of whether you are an experienced business owner aiming to start your next project or someone entering the world of business ownership for the first time.

Research Gaps

Comprehensive studies that integrate career anchoring, personality traits, and training to determine their combined impact on entrepreneurship are still rare, despite the growing interest in entrepreneurship. Previous studies frequently look at each of these components separately, producing results that are not cohesive. This research aims to fill the following gaps:

Inadequate integration of personality traits and career anchoring: Prior studies have not sufficiently investigated how certain personality traits and career anchors combine to influence entrepreneurial decisions.

Insufficient attention to the efficacy of training: To evaluate how various training programs close the gap between entrepreneurial ambitions and the formation of successful ventures, more empirical data is required.

Research Objective

This study aims to explore how personality traits, career anchoring, and training interact to influence the goals and results of entrepreneurship. The study's specific objectives are to:

i. Identify the essential personality traits that have a major impact on entrepreneurial intentions.
ii. Examine how personality, career anchoring, and training work together to improve the performance of the business ideation stage of entrepreneurship.

Research Methodology

The study took six months to finish, starting in July 2023. The methods and controls used to collect and evaluate the data are described in this section as follows:

Research Design

A sample of persons who were thinking about or were interested in launching their own business was one of the study's participants. The participants were chosen from relevant online groups, company incubators, and entrepreneurship training programs. Every one of the 312 study participants desired to launch their own company. Convenience sampling was used to choose them.

A systematic questionnaire has been developed to encompass the study's variables, which include personality traits (PT), entrepreneurial training (ET), career anchoring (CA), and the business idea stage of entrepreneurship (BISE).

Data Analysis Techniques & Tools:

For data analysis, IBM-SPSS Statistics 20 was utilized. The data were analyzed using an independent Sample t-test, one sample test& One Way ANOVA. The participants were selected from relevant online groups, incubators, and entrepreneur training programs. They represented a variety of demographic factors, including gender, age, employment position, and monthly income. The data were gathered using a convenience sample. The questionnaire statement was scored on a 5-point Likert scale, where 1 represented strong agreement and 5 represented extreme dissent. Simple descriptive statistics (mean, standard deviation) were used to evaluate the data to provide an overview of the sample characteristics. One-way ANOVA was then used to look at the relationship between the variables.

Result & Discussion

The information gathered from a sample of 312 participants through a descriptive questionnaire is analyzed and presented in this portion of the research report. One of the study's participants was a sample of people considering starting their own business or were interested in doing so. The participants were selected from entrepreneurship training programs, firm incubators, and pertinent internet groups. All 312 survey participants wanted to start their own business. Convenience sampling was employed to choose them.

The study's variables, which include personality traits (PT), career anchoring (CA), entrepreneurial training (ET), and the business idea stage of entrepreneurship (BISE), have been compiled into a methodical questionnaire.

Demographic Profile of the Respondents

This demographic profile provides an overview of the respondents based on their age, gender, and involvement in entrepreneurship training. Male respondents make up most of the sample (65.7%), with a sizeable proportion of female respondents (34.3%). Based on the age distribution, many people (67.8%) are between the ages of 30 and 40, then over 50 (19.9%), and a lesser fraction (12.2%) are between the ages of 40 and 50. Additionally, the data shows that 89.2% of respondents had not undergone entrepreneurship training, compared to 10.8% of respondents who have. Knowing the demographic composition of the sample can be very useful for assessing and interpreting survey results in the context of entrepreneurship or related studies.

Table 1: Profile of the responders

		Percentage
Gender	Female	34.3
	Male	65.7
	Total	100
Age Group	30-40 Years	67.8
	40-50 Years	12.2
	Above 50 Years	19.9
	Total	100.0
Respondents having Entrepreneurial Training		10.8
Respondents not having Entrepreneurial Training		89.2
Total		100

Descriptive Analysis

In this analysis, descriptive statistics have been examined for variables like personality traits, entrepreneurial training, career anchoring, and business imagination stages of Entrepreneurship. The data set contains responses from 312 individuals. A thorough analysis of each variable is discussed below:

Personality Traits

The analysis of personality traits reveals that respondents generally score within a moderate range across all dimensions, with openness (3.53–4.09) and agreeableness (3.97–4.17) showing tightly clustered responses and low variability. Conscientiousness displays the widest variation, particularly with one item (Conscientiousness2) having a high standard deviation of 1.231, indicating diverse perceptions. Extraversion and neuroticism show consistent patterns with moderate mean scores

and standard deviations, suggesting stable traits among respondents. Overall, agreeableness emerges as the most uniform trait, while conscientiousness reflects the greatest diversity.

Entrepreneurial Training

The entrepreneurial training means scores vary from 3.38 to 3.55. The fact that standard deviations are minimal suggests that respondents' opinions of entrepreneurial training are often consistent.

Career Anchoring

The mean scores for self-perceived skills and abilities (**??**) and self-perceived motives and needs (**??**) show consistency among respondents, supported by low standard deviations, indicating stable self-assessments in these career anchoring dimensions. In contrast, self-perceived attitudes and values, with a similar mean of 3.46 but a moderate standard deviation, suggest slightly more variability in how individuals perceive this aspect, pointing to a broader range of personal values influencing career choices.

Business Ideation Stage of Entrepreneurship (BISE)

The mean ratings for these four entrepreneurial business ideation stage factors range from 3.10 to 3.30, indicating a moderate level of perception or agreement among respondents. The moderate standard deviations indicate some answer variability, but overall, the respondents' grasp of these features is quite constant.

In conclusion, the data sheds light on the respondents' personality traits (Openness, Conscientiousness, Extraversion, Agreeableness, and neuroticism), perceptions of entrepreneurship education, career anchoring, and stages of business ideation. Most variables exhibit moderate to low standard deviations overall, indicating that the sample's responses were generally consistent. Personality Trait of Conscientiousness, Career Anchoring variable of self -Perceived attitudes and values, among other measures, had higher standard deviations than others, indicating greater response variability.

Table 2: Descriptive Analysis

	N	Minimum	Maximum	Mean	Std. Deviation
PT-O1	312	1	5	3.53	.896
PT-O2	312	1	5	3.65	.804
PT-03	310	2	5	3.90	.472
PT-O4	312	2	5	3.95	.533
PT-05	312	2	5	4.09	.545
PT-C1	312	3	5	3.93	.512
PT-C2	312	1	5	3.22	1.231
PT-C3	312	3	5	4.14	.705
PT-C4	312	2	5	4.15	.635
PT-C5	312	2	5	3.90	.603
PT-E1	312	1	5	3.65	.775
PT-E2	312	1	5	3.71	1.021
PT-E3	312	1	5	3.87	.875
PT-E4	312	2	5	3.65	.706
PT-E5	312	2	5	3.68	.694
PT-A1	312	2	5	3.97	.563
PT-A2	312	3	5	4.12	.543
PT-A3	311	3	5	4.13	.595
PT-A4	303	3	5	4.17	.559
PT-A5	312	2	5	3.99	.446
PT-N1	312	1	5	3.23	.801
PT-N2	312	2	5	3.35	.906
PT-N3	312	1	5	3.35	.858
PT-N4	312	1	5	3.45	.870
PT-N5	312	1	4	3.24	.985
ET-1	312	2	5	3.47	.734
ET-2	311	2	5	3.55	.615
ET-3	312	2	5	3.38	.577
ET-4	305	3	5	3.41	.524
ET-5	304	3	5	3.46	.585
CA-1	305	2	5	3.47	.607
CA-2	305	2	5	3.54	.622
CA-3	302	3	5	3.46	.568
CA-4	299	1	5	2.92	.915
CA-5	297	1	5	2.98	.900
BISE-1	298	1	5	3.10	.948
BISE-2	304	1	5	3.30	.881
BISE-3	268	1	5	3.15	.923
BISE-4	299	1	5	3.27	.911

In the Above Table Nomenclatures are:
PTO- Personality Trait -Openness, PTC-Personality Trait- Conscientiousness, PTE- Personality Trait- Extraversion, PTA- Personality Trait- Agreeableness, PTN- Personality Trait- Neuroticism, ET-Entrepreneurial Training, CA- Career Anchoring, BISE- Business Ideation Stage of Entrepreneurship.

Independent Samples t-Test (Male vs. Female)

Table 3: Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means	
		F	Sig.	t	Df
APT-O	Equal variances assumed	6.887	.009	-1.407	310
	Equal variances not assumed			-1.466	241.058
APT-C	Equal variances assumed	1.631	.203	.618	310
	Equal variances not assumed			.607	205.058
AP T-E	Equal variances assumed	.832	.362	-1.663	310
	Equal variances not assumed			-1.640	206.786
APT-A	Equal variances assumed	15.495	.000	-2.180	310
	Equal variances not assumed			-1.963	162.906
APT-N	Equal variances assumed	1.525	.218	.314	310
	Equal variances not assumed			.322	230.995
AET	Equal variances assumed	.000	.985	-.036	310
	Equal variances not assumed			-.036	215.051
ACA	Equal variances assumed	.012	.913	.682	310
	Equal variances not assumed			.670	204.680
ABISE	Equal variances assumed	2.759	.098	1.979	309
	Equal variances not assumed			1.988	218.080

Detailed Analysis for the independent sample T-test

Analysis & Discussion:
The table presents the results of an Independent Samples t-test, which was conducted to compare the means of several variables (personality traits, entrepreneurial training, career anchoring, and business ideation) between two groups (males and females). Each test checks for significant differences between the two groups.

The analysis is performed under two conditions for each variable:
Equal variances assumed: This test assumes that the variance in both groups (male and female) is the same.
Equal variances not assumed: This test is used if Levene's Test for Equality of Variances shows a significant result (indicating that the variances are unequal).

Interpretation of Key Results:

Levene's Test for Equality of Variances: Levene's test assesses whether the variance of the two groups (male and female) is equal. If the p-value (Sig.) is less than 0.05, the variances are significantly different, and the test that assumes "Equal variances not assumed" should be used. If the p-value is greater than 0.05, variances can be considered equal, and the result for "Equal variances assumed" can be used.

t-Test for Equality of Means: The t-value represents the difference in means between males and females, considering the variance. A positive t-value indicates that males scored higher on average, while a negative t-value indicates that females scored higher.
The p-value (Sig.) associated with the t-test indicates whether the difference between the means is statistically significant. A p-value less than 0.05 means the difference is significant.

Detailed Analysis by Variable:
The independent samples t-test results show no significant gender differences in openness, conscientiousness, extraversion, neuroticism, entrepreneurial training, and career anchoring, with all p-values exceeding 0.05. Although agreeableness approached significance ($p = 0.051$), it did not meet the threshold, though the Levene's Test ($p = 0.000$) indicated unequal variances, suggesting a possible context-dependent trend. The only statistically significant difference emerged in the business ideation stage of entrepreneurship ($p = 0.049$), indicating that males and females differ meaningfully in this

phase, with females likely scoring higher. This highlights the need to explore gender-specific patterns in entrepreneurial ideation while affirming overall consistency across most traits and training variables.

Conclusion:

The analysis reveals minimal gender differences across most personality traits, entrepreneurial training, and career anchoring, consistent with existing research that shows men and women score similarly on openness, conscientiousness, and extraversion (Costa et al., 2001; Feingold, 1994; Lippa, 2005). Slight trends in agreeableness and neuroticism, where women may score marginally higher, align with findings from Schmitt et al. (2008) and Costa et al. (2001), though these differences often depend on cultural and contextual factors. The absence of significant gender gaps in entrepreneurial training and career anchoring supports literature indicating that both men and women benefit equally from structured development programs (Brush, 1992; Henry et al., 2016).

The notable gender difference in the business ideation stage suggests that men and women may approach early entrepreneurial activity differently. Research by Fischer et al. (1993), Jennings & Brush (2013), and Minniti (2010) highlights that men often engage more readily in idea generation and risk-taking, while women tend to emphasize validation and collaboration before progressing. These early-stage behavioral differences may be shaped by confidence levels and risk perception, but they tend to diminish with increased entrepreneurial exposure and education, pointing to the importance of tailored support in the ideation phase.

Table 4: Independent Samples Test

		t-test for Equality of Means			
		Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference
					Lower
APTO	Equal variances assumed Equal variances not assumed	.160 .144	-.063 -.063	.045 .043	-.152 -.149
APTC	Equal variances assumed Equal variances not assumed	.537 .544	.032 .032	.051 .052	-.069 -.071
APTE	Equal variances assumed Equal variances not assumed	.097 .103	-.111 -.111	.067 .068	-.243 -.245
APTA	Equal variances assumed Equal variances not assumed	.030 .051	-.070 -.070	.032 .036	-.133 -.140
APTN	Equal variances assumed Equal variances not assumed	.754 .748	.023 .023	.074 .072	-.123 -.119
AET	Equal variances assumed Equal variances not assumed	.971 .971	-.002 -.002	.063 .063	-.126 -.126
ACA	Equal variances assumed Equal variances not assumed	.496 .504	.041 .041	.060 .061	-.077 -.079
ABISE	Equal variances assumed Equal variances not assumed	.049 .048	.167 .167	.084 .084	.001 .001

Table 5: Independent Samples Test

		t-test for Equality of Means
		95% Confidence Interval of the Difference
		Upper
APTO	Equal variances assumed	.025
	Equal variances not assumed	.022
APTC	Equal variances assumed	.132
	Equal variances not assumed	.134
APTE	Equal variances assumed	.020
	Equal variances not assumed	.023
APTA	Equal variances assumed	-.007
	Equal variances not assumed	.000
APTN	Equal variances assumed	.169
	Equal variances not assumed	.166
AET	Equal variances assumed	.122
	Equal variances not assumed	.122
ACA	Equal variances assumed	.158
	Equal variances not assumed	.161
ABISE	Equal variances assumed	.333
	Equal variances not assumed	.332

To provide a detailed analysis for the independent samples t-test, we will break down the results for each variable in the context of the two groups: Male and Female. The t-test examines whether there is a statistically significant difference between the means of these two groups for each personality trait, entrepreneurial training, career anchoring, and business ideation stage of entrepreneurship.

Here's a step-by-step interpretation of each variable's results:

1. APTO (Average of Personality Trait Openness)

Equal variances assumed: p-value = 0.160, mean difference = -0.063

Equal variances not assumed: p-value = 0.144, mean difference = -0.063

Interpretation:

The p-value (0.160) is greater than 0.05, indicating that there is no significant difference in the openness personality trait between males and females.

The negative mean difference (-0.063) shows that females might have slightly lower openness scores on average than males, but the difference is not statistically significant.

2. APTC (Average of Personality Trait Conscientiousness)

Equal variances assumed: p-value = 0.537, mean difference = 0.032

Equal variances not assumed: p-value = 0.544, mean difference = 0.032

Interpretation:

The p-value (0.537) is greater than 0.05, so there is no significant difference in conscientiousness between males and females.

The small positive mean difference (0.032) suggests that females might have slightly higher conscientiousness scores, but the difference is not statistically significant.

3. APTE (Average of Personality Trait Extraversion)

Equal variances assumed: p-value = 0.097, mean difference = -0.111

Equal variances not assumed: p-value = 0.103, mean difference = -0.111

Interpretation:

The p-value (0.097) is just above the 0.05 threshold, indicating that the difference in extraversion between males and females is not statistically significant, though it is approaching significance.

The negative mean difference (-0.111) suggests that females may have lower extraversion scores than males, but the difference is not significant.

4. APTA (Average of Personality Trait Agreeableness)

Equal variances assumed: p-value = 0.030, mean difference = -0.070

Equal variances not assumed: p-value = 0.051, mean difference = -0.070

Interpretation:

The p-value (0.030) is less than 0.05, indicating a statistically significant difference in agreeableness between males and females when equal variances are assumed. However, when variances are not assumed, the p-value is 0.051, which is marginal.

The negative mean difference (-0.070) indicates that females tend to score lower in agreeableness compared to males. This difference is statistically significant under the assumption of equal variances.

5. APTN (Average of Personality Trait Neuroticism)
Equal variances assumed: p-value = 0.754, mean difference = 0.023
Equal variances not assumed: p-value = 0.748, mean difference = 0.023
Interpretation:
The p-value (0.754) is much greater than 0.05, indicating no significant difference in neuroticism between males and females.
The positive mean difference (0.023) suggests females might have slightly higher neuroticism scores than males, but this difference is not statistically significant.

6. AET (Average of Entrepreneurial Training)
Equal variances assumed: p-value = 0.971, mean difference = -0.002
Equal variances not assumed: p-value = 0.971, mean difference = -0.002
Interpretation:
The p-value (0.971) is much greater than 0.05, indicating no significant difference in entrepreneurial training between males and females.
The mean difference is negligible (-0.002), suggesting that males and females score almost the same in entrepreneurial training.

7. ACA (Average of Career Anchoring)
Equal variances assumed: p-value = 0.496, mean difference = 0.041
Equal variances not assumed: p-value = 0.504, mean difference = 0.041
Interpretation:
The p-value (0.496) is greater than 0.05, indicating no significant difference in career anchoring between males and females.
The small positive mean difference (0.041) suggests that females might have slightly higher career anchoring scores, but the difference is not statistically significant.

8. ABISE (Average of Business Ideation Stage of Entrepreneurship)
Equal variances assumed: p-value = 0.049, mean difference = 0.167
Equal variances not assumed: p-value = 0.048, mean difference = 0.167
Interpretation:
The p-value (0.049 and 0.048) is less than 0.05, indicating a statistically significant difference between males and females in the business ideation stage of entrepreneurship.
The positive mean difference (0.167) indicates that females tend to have higher scores in business ideation compared to males, and this difference is statistically significant.

6 Summary & Conclusion

The independent samples t-test revealed significant gender differences in agreeableness (APTA) and the business ideation stage (ABISE), with males scoring higher in agreeableness and females scoring higher in ideation. These findings contrast slightly with existing literature, where women are generally found to be more agreeable (Costa et al., 2001), suggesting that contextual factors may have influenced the results. On the other hand, the significant difference in business ideation supports prior research indicating that women often demonstrate higher creativity and innovation during early-stage entrepreneurship, as seen in studies by Kelley et al. (2017) and Brush et al. (2006). These studies highlight women's strengths in idea generation and holistic thinking, though they may face more challenges during implementation.
No significant gender differences were observed in openness, conscientiousness, extraversion, neuroticism, entrepreneurial training, and career anchoring. These results align with previous studies (Feingold, 1994; Schmitt et al., 2008; Elam & Terjesen, 2010) that suggest men and women generally score similarly across these dimensions, and both benefit equally from entrepreneurial education. The non-significant difference in career anchoring supports Marshall and Bonner's (2003) view that such preferences are more influenced by individual context, age, or experience than by gender alone. Overall, while a few gender differences emerged, the majority of traits and entrepreneurial indicators remain consistent across genders, reinforcing the importance of inclusive and balanced entrepreneurial training and support systems.
Most of the findings of the study have been supported by literature, particularly the lack of significant differences in many personality traits and entrepreneurial training between males and females, as well as the significant difference in the business ideation stage, where females tend to excel.

One Way ANOVA

Table 6: ANOVA

		Sum of Squares	df	Mean Square	F	Sig.
APTO	Between Groups	.135	2	.068	.468	.627
	Within Groups	44.457	308	.144		
	Total	44.592	310			
APTC	Between Groups	.314	2	.157	.860	.424
	Within Groups	56.175	308	.182		
	Total	56.489	310			
APTE	Between Groups	.161	2	.080	.251	.778
	Within Groups	98.502	308	.320		
	Total	98.662	310			
APTA	Between Groups	.059	2	.029	.401	.670
	Within Groups	22.681	308	.074		
	Total	22.740	310			
APTN	Between Groups	4.469	2	2.234	5.946	.003
	Within Groups	115.731	308	.376		
	Total	120.199	310			
AET	Between Groups	17.451	2	8.725	39.249	.000
	Within Groups	68.472	308	.222		
	Total	85.923	310			
ACA	Between Groups	10.797	2	5.398	24.759	.000
	Within Groups	67.158	308	.218		
	Total	77.955	310			
ABISE	Between Groups	3.701	2	1.850	3.745	.025
	Within Groups	151.670	307	.494		
	Total	155.371	309			

Detailed Analysis of ANOVA

The ANOVA results indicate that personality traits such as openness (APTO), conscientiousness (APTC), extraversion (APTE), and agreeableness (APTA) do not significantly differ across groups, suggesting these traits remain relatively stable regardless of entrepreneurial experience or training. This aligns with existing literature, including McCrae and Costa's Five-Factor Model, which highlights the stability of these traits over time. While traits like extraversion and agreeableness are linked to social interaction and interpersonal effectiveness, their non-significant variation across groups implies that entrepreneurial potential is not limited by these attributes alone.

In contrast, significant differences were observed in neuroticism (APTN), entrepreneurial training (AET), and career anchoring (ACA), indicating variability in emotional resilience, training exposure, and career motivations among groups. The strong significance of entrepreneurial training ($p = 0.000$) supports literature asserting its role in enhancing entrepreneurial skills and intentions (Fayolle & Gailly, 2008). Similarly, the variation in career anchoring reflects how personal values and experiences shape entrepreneurial paths, consistent with Schein's theory. The significant difference in the business ideation stage (ABISE, $p = 0.025$) further emphasizes that tailored training aligned with individual traits and motivations can enhance ideation capabilities and entrepreneurial readiness. These findings highlight the need for differentiated, person-centered entrepreneurial education models that consider both personality and experiential factors.

Research implications:

The analysis underscores the importance of individual differences in personality traits and career anchoring, highlighting that personalized coaching and tailored interventions are more effective than generic approaches in fostering entrepreneurial development. Variability in conscientiousness and career anchoring, along with moderate levels of traits like extraversion and openness, suggests that self-awareness and targeted support can better guide individuals at varying stages of entrepreneurial readiness. These insights offer practical value for educators, counselors, and mentors in designing customized development strategies and point to future research opportunities that can strengthen entrepreneurial education and enhance individual and societal outcomes.

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