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Born Not Made: The Impact of Six Entrepreneurial Personality Dimensions on Entrepreneurial Intention: Evidence from Healthcare Higher Education Students

Maged E. Mohamed ^{1,2,3,*} , Ibrahim Abdelhamid Elshaer ^{1,4,5} , Alaa M. S. Azazz ^{1,6,7} 
and Nancy S. Younis ^{1,2,8} 

- ¹ The Saudi Investment Bank Scholarly Chair for Investment Awareness Studies, The Deanship of Scientific Research, The Vice Presidency for Graduate Studies and Scientific Research, King Faisal University, Al-Ahsaa 31982, Saudi Arabia
 - ² Department of Pharmaceutical Sciences, College of Clinical Pharmacy, King Faisal University, Al-Ahsaa 31982, Saudi Arabia
 - ³ Department of Pharmacognosy, College of Pharmacy, Zagazig University, Zagazig 44519, Egypt
 - ⁴ Department of Management, College of Business Administration, King Faisal University, Al-Ahsaa 31982, Saudi Arabia
 - ⁵ Hotel Studies Department, Faculty of Tourism and Hotels, Suez Canal University, Ismailia 41522, Egypt
 - ⁶ Department of Tourism and Hospitality, Arts College, King Faisal University, Al-Ahsaa 31982, Saudi Arabia
 - ⁷ Tourism Studies Department, Faculty of Tourism and Hotels, Suez Canal University, Ismailia 41522, Egypt
 - ⁸ Zagazig University Hospitals, Zagazig University, Zagazig 44519, Egypt
- * Correspondence: Memohamed@kfu.edu.sa



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Abstract: Background: The KSA government has envisioned a national transformation plan via Vision 2030. The purpose of this plan is liberalization which provides an opportunity for the private sector to increase its share in the healthcare system. Evaluating the entrepreneurial potential of healthcare students is essential due to their future role in the healthcare environment. Thus, the goal of the current study is to measure entrepreneurial intentions and identify the characteristics and personality dimensions among junior healthcare students and fresh graduates in Saudi Arabia. Materials and methods: A cross-sectional study design was utilized to survey healthcare students in their final years of study and fresh graduates at King Faisal University (KFU), Saudi Arabia. The research team identified six as the most common entrepreneurial intention traits. Entrepreneurial traits included internal locus of control, innovativeness, risk-taking, proactiveness, autonomy, and problem-solving. A previously recognized and validated questionnaire was distributed through social media platforms and formal university emails. PLS-SEM was employed for the examination of both the measurement and structural models. Results: Internal locus of control was found to have a positive impact on entrepreneurial intention, so H1 was supported. Likewise, innovativeness showed a positive impact on entrepreneurial intention among healthcare students, which confirmed H2. The results also showed that autonomy substantially impacted entrepreneurial intention, so H3 was supported. Similarly, proactiveness has a direct influence on entrepreneurial intention; thus, H5 was supported. Furthermore, problem-solving personality dimensions also had a positive impact on entrepreneurial intention, so H5 and H6 were supported. Conversely, risk-taking propensity exhibited a negative insignificant effect on entrepreneurial intention. Thus, H4 was not supported. Conclusions: Saudi healthcare students revealed their intention towards entrepreneurship and were quite positive about becoming entrepreneurs. Furthermore, students' entrepreneurial intention was affected by their quality of proactiveness, innovativeness, internal locus of control, problem-solving, and autonomy but not risk-taking propensity.

Keywords: autonomy; entrepreneurial intentions; healthcare students; innovativeness; pro-activeness; problem-solving; risk-taking

1. Introduction

Entrepreneurship is the capability to distinguish and pursue a business opportunity and to acquire the indispensable skills to capitalize on the benefits [1]. Entrepreneurial traits include internal locus of control, innovativeness, risk-taking, proactiveness, autonomy, and problem-solving. Internal locus of control is the feeling or conception of critical features that may affect or cause life events [2,3]. Rotter [4] explored personality dimensions by using the concept of locus of control, asserting that people with an internal locus of control believe that success and failure depend on the amount of effort invested and that they can control their fate. Innovativeness may be defined as the degree to which an individual adopts an innovation relatively earlier than other system members [5]. Thus, innovativeness is the capability to distinguish, as well as to accomplish, entrepreneurial tasks in a creative mode [6], whereas risk-taking is the desire to actively seize, pursue, and follow opportunities in an uncertain atmosphere via accepting the risk involved [7]. Therefore, this trait has been associated with building capacity since it endorses a constructive approach toward self-efficacy [8]. Proactivity refers to the active attempts made by the individual to effect changes in his or her environment [9]. According to Bateman and Crant [10], people with proactive personalities tend to take the initiative to influence and even change the environment significantly. Other features of entrepreneurial traits include autonomy and problem-solving. Autonomy means that individuals make their own choices independent of others [11]. Prior studies have shown that entrepreneurs have a higher need for independence, i.e., autonomy, than the general population [12]. Entrepreneurial autonomy indicates the ability to decide what, how, and even when everything is accomplished, as well as the whole enterprise's strategy [13]. Finally, problem-solving is about the successful search for a strategy to make something work or control a system in an efficient way [14]. Problem-solving ability positively influences innovation behavior and opportunity perception [15], rendering it a crucial factor for success in organizations, as well as personal careers [16]. An extensive review of earlier research carried out by Jain and Ali [17] in the area of facilitators, barriers, and gateways to entrepreneurship showed that entrepreneurship is influenced by both extrinsic environmental factors and intrinsic individual characteristics. The opportunity to be innovative, the need for achievement, the internal locus of control, and innovativeness, along with pro-activeness and risk-taking propensity influence business performance. The theory of planned behavior (TPB) [18] suggests that attitudes, subjective norms, and PBC (perceived behavioral control) are used in order to predict an intention with high accuracy. Through the behavioral intention that is referred to as entrepreneurial intention, TPB suggests that important beliefs form the determinants of attitude toward behavior, subjective norm, and perceived behavioral control. Entrepreneurship is crucial in economic progression, job opportunity creation, poverty alleviation, and socioeconomic difficulty resolving [19,20]. The entrepreneurial implication to economic growth has obligated governments to motivate entrepreneurial endeavors and promote entrepreneurial traits in individuals.

The 2030 Saudi Vision has unique content and messages pursuing entrepreneurs. The major goals of Saudi Arabia in its 2030 Vision are to provide opportunities for everyone by constructing an educational scheme that meets the labor market requirements [21]. Another strategic goal of the vision is enhancing the involvement of small- and medium-sized enterprises (SMEs) in the overall nationwide economy and decreasing unemployment rates [20]. Saudi Arabia has executed various procedures to endorse the expansion of entrepreneurship and SMEs, including establishing funding organizations, entrepreneurial initiatives, and incubators [22]. Saudi Arabia is ranked sixth on the Global Entrepreneurship Index (GEI). This is because of the enormous economic support provided by the Saudi government for economic expansion. This support is essential since the SME sector is approximately 99.6% of all private segment ventures in Saudi Arabia [23]. Currently, Saudi Arabia follows the national healthcare model, in which the provision of health services is primarily the responsibility of the government. The private sector's role is nominal compared to the government sector [21]. Therefore, under the able leadership of the young

Deputy Crown Prince Muhammad Bin Salman, the government has envisioned a national transformation plan via Vision 2030. The purpose of this plan is liberalization, which provides an opportunity for the private sector and reduces the pressure on the public sector. The government plans to restructure and reform the healthcare system by involving the private sector and increasing its share from 25% to 35% in the coming years [24]. Healthcare students, the future of healthcare, have a huge opportunity and role in entrepreneurship. Thus, it is imperative to measure entrepreneurial intentions and identify the characteristics and personality dimensions among junior healthcare students and fresh graduates.

Recently, entrepreneurial attitude has become more recognized in the healthcare field. The healthcare system is under tremendous pressure to control costs while still providing high-quality care, education, and research; thus, the need for alternative revenue sources compels the healthcare system to consider how to promote entrepreneurial activity [25]. An institutional focus on encouraging initiative, identifying opportunities, and developing appropriate alliances and mechanisms for exploiting opportunities that extend beyond the perceived strategies or missions of the entity can help healthcare organizations leverage their resources and take advantage of the benefits of entrepreneurship [25]. One study described an effort to nurture the development of positive entrepreneurial capabilities in the undergraduate health administration classroom [26]. Evaluating the entrepreneurial potential of healthcare students is essential due to their future role in the healthcare environment. The development of innovative patient-care services and practice models, which can expand healthcare quality and outcomes and decrease costs, necessitate entrepreneurial abilities among healthcare students and fresh graduates [27,28]. Personality dimensions are some of the most imperative predictors of successful entrepreneurs. Students' entrepreneurial personality dimensions are expected to cultivate innovative practices or embrace a more patient-oriented role in the future.

In Saudi Arabia, few studies have been executed on entrepreneurial intention and traits. Instead, most Saudi studies have been dedicated to entrepreneurial education, psychological capital, and recognized institutions, among related features [29–31]. Having consistent and validated procedures for recognizing entrepreneurial traits among healthcare students may be indispensable for the development of future entrepreneurial healthcare members. Thus, the objective of the current study was to measure entrepreneurial intentions and identify the characteristics and personality dimensions among junior healthcare students and fresh graduates associated with entrepreneurship.

2. Materials and Methods

2.1. Study Design

A cross-sectional study design was used to survey healthcare students in their final years and fresh graduates at King Faisal University (KFU). A questionnaire, included in the Supplementary Materials, was established using previously recognized and validated scales. Based on an extensive review of the previous studies, the research team identified six traits as the most common in entrepreneurial intention [8,10,29,30]. The employed scale items were piloted by thirteen professors and twenty-two healthcare senior students and fresh graduates to ensure clarity, consistency, and simplicity; as a result, no amendments were made to the employed original questionnaire items. The questionnaire consisted of three sections; the first section included a few questions about the respondent demographic, such as age, gender, and college. The second section was concerned with entrepreneurial intention. The entrepreneurial intention was assessed using three questions. These questions included whether the students or the fresh graduates have the objective to start a self-owned business in 2 years, a self-owned business to provide radical innovation, or a self-owned business to introduce a new variant of existing service. The third section was related to the respondents' entrepreneurial traits. It consisted of 28 questions measuring six personality dimensions. The personality dimensions included were internal locus of control, which included six items [32], innovativeness (three items) [32], autonomy (five items), risk-taking propensity (three items) [8,33], proactiveness (five items) [10], and

problem-solving (six items) [34]. Responses to all questions were rated on a seven-point Likert scale (one meant utterly disagree, and seven meant completely agree). These traits were incorporated based on their association with entrepreneurial intentions, past literature, and empirical knowledge and were found to have good psychometric properties [5,20–22].

2.2. Data Collection

The targeted data for our study were obtained by a quantitative-based approach implemented through employing an online survey. The survey was distributed through social media platforms and formal university emails, and delivered to senior healthcare students and fresh graduates. These questionnaires were acquired through non-probability convenient sampling to attract several senior healthcare students and new graduates to probe into the level to which they believe they have the traits to be an entrepreneur. Senior healthcare students and fresh graduates were selected as they may think about their future career paths and intend to start and run their own businesses. Fresh graduates (as in the case of students) in Saudi Arabia can obtain different levels of support from their public universities (i.e., technical, marketing, and financial support) to run their own businesses. A total of 370 students completed the questionnaire. After an extensive questionnaire screening, 329 questionnaires were retained valid, with a response rate of 89%.

We have examined our study for missing data utilizing the SPSS package and observed several missing scores randomly appearing in 41 out of 370 questionnaires (>5%). We preferred to eliminate these questionnaires as they can dramatically affect the research results [27]. Therefore, a total of 329 valid questionnaires were employed in our study. Additionally, we used boxplot in the SPSS and found no outliers in our scale variables. The ethical committee approved the current study at King Faisal University (KFU-REC-2022-SEP-ETHICS186). Each student participated voluntarily in our study after knowing the study's aim and started filling in the survey after giving consent.

2.3. Statistical Analysis Techniques

Partial least squares-based structural equation modeling (PLS-SEM) is a technique that is suitable for testing and validating the early stages of a theory development [35]. Addressing its benefits in multivariate analysis [36] and its positive results in small sample studies [37], PLS-SEM was employed to examine the measurement and structural models. In addition, as Field Hair, Ringle and Sarstedt [24] suggested, 5000 bootstraps repeated 329 samples, and were used to assess the significance of the path coefficient to achieve a more accurate calculation of coefficient values.

2.4. Common Method Bias

To prevent common method variance (CMV) [38] we used anonymous survey completion and provided clear descriptions of the study topic. In addition, in accordance with Wang et al. [39], Harman's single factor test was utilized to assess the common method bias. The results indicate that the proportion of variation explained by a single component was 43.5%, which did not surpass the 50% threshold [40], indicating that no common method bias was identified in this study.

3. Results

3.1. Sample Profile

The valid respondents of this study were 329 students at King Faisal University, including 55% male students and 45% female students. As expected, most students were under 25 years old (95%). A total of 30% of participants were from clinical pharmacy college, 25% from medicine, 20% from dentistry, and 15% from applied medical science college. Among 329 respondents, 76% were senior students, and 24 were fresh graduates. A total of 25% of the respondents have experience running their businesses, while 75% have experience working in private or public healthcare. We have examined our study for missing data utilizing the SPSS package and observed several missing scores randomly appearing in

41 out of 370 questionnaires (>5%). We preferred eliminating these questionnaires as they can dramatically affect the research results [24]. Therefore, a total of 329 valid questionnaires were employed in our study. Additionally, we used boxplot in the SPSS and found no outliers in our scale variables.

3.2. Measurement Model Analysis

Following the suggestions of Leguina [41], we assessed the reliability and validity of the study measurement model before testing the structural model. The outcomes are presented in Tables 1 and 2, respectively. Regarding dimensional reliability, both composite reliability with Cronbach's alpha metrics could be utilized for assessment. According to the recommendations of Hair, Ringle and Sarstedt [36], both values of composite reliability (CR) and Cronbach's alpha (a) values should exceed the value of 0.7. The results of the current study declared that the CR values of all employed dimensions ranged between 0.826 and 0.987, and values varied between 0.826 and 0.984, suggesting that dimensional reliability fulfills the conditions.

Table 1. Validity and reliability calculations.

Factors	a	CR	(AVE)	1	2	3	4	5	6
1-Autonomy	0.979	0.983	0.923	0.961					
2-Entrepreneurial intention	0.826	0.826	0.742	0.403	0.861				
3-Innovativeness	0.971	0.972	0.945	0.238	0.445	0.972			
4-Locus of control	0.984	0.987	0.925	0.152	0.262	0.073	0.962		
5-Proactiveness	0.973	0.973	0.972	0.236	0.356	0.315	−0.008	0.986	
6-Problem-solving	0.924	0.934	0.727	0.196	0.384	0.347	−0.076	0.411	0.852
7-Risk-taking	0.973	0.980	0.949	−0.047	−0.125	−0.157	0.172	0.106	−0.236

a: Cronbach's alpha; CR: composite reliability; AVE: average variance extracted; the diagonal bold is the square root value of the average variance extraction amount.

Table 2. Factor loadings and cross-loadings.

Factors/items	Autn.	Inten.	Innvt.	ILC	Proact.	Proslv.	Rsk.
Autn_1	0.930	0.340	0.203	0.103	0.271	0.164	0.021
Autn_2	0.967	0.367	0.224	0.123	0.258	0.194	0.004
Autn_3	0.938	0.421	0.228	0.176	0.151	0.181	−0.138
Autn_4	0.991	0.395	0.239	0.153	0.238	0.198	−0.047
Autn_5	0.977	0.405	0.246	0.165	0.229	0.202	−0.047
ILC_1	0.232	0.276	0.094	0.928	0.034	−0.036	0.211
ILC_2	0.156	0.259	0.071	0.974	−0.033	−0.069	0.172
ILC_3	0.137	0.255	0.060	0.982	−0.026	−0.079	0.174
ILC_4	0.130	0.265	0.071	0.980	0.000	−0.069	0.157
ILC_5	0.112	0.228	0.052	0.966	−0.014	−0.093	0.129
ILC_6	0.093	0.223	0.071	0.941	−0.015	−0.100	0.141
Innvt_1	0.242	0.420	0.978	0.077	0.293	0.329	−0.150
Innvt_2	0.243	0.442	0.985	0.071	0.292	0.345	−0.147
Innvt_3	0.210	0.436	0.953	0.067	0.332	0.338	−0.162
Inten_1	0.385	0.865	0.388	0.196	0.265	0.365	−0.084

Table 2. Cont.

Factors/items	Autn.	Inten.	Innvt.	ILC	Proact.	Proslv.	Rsk.
Inten_2	0.384	0.858	0.344	0.251	0.242	0.300	−0.181
Inten_3	0.274	0.861	0.417	0.231	0.412	0.327	−0.059
Proact_1	0.253	0.349	0.305	−0.017	0.994	0.410	0.122
Proact_2	0.208	0.361	0.303	−0.003	0.985	0.408	0.076
Proact_3	0.214	0.358	0.309	−0.011	0.991	0.410	0.091
Proact_4	0.240	0.337	0.330	0.007	0.965	0.387	0.118
Proact_5	0.249	0.351	0.305	−0.017	0.994	0.409	0.120
Proslv_1	0.095	0.285	0.286	−0.081	0.387	0.804	−0.175
Proslv_2	0.130	0.285	0.262	−0.041	0.405	0.810	−0.161
Proslv_3	0.196	0.404	0.351	−0.004	0.343	0.839	−0.130
Proslv_4	0.209	0.334	0.285	−0.091	0.332	0.879	−0.243
Proslv_5	0.174	0.316	0.286	−0.080	0.324	0.887	−0.254
Proslv_6	0.178	0.311	0.289	−0.106	0.324	0.891	−0.255
Rsk_1	−0.051	−0.119	−0.164	0.176	0.089	−0.241	0.979
Rsk_2	−0.074	−0.137	−0.171	0.166	0.081	−0.250	0.984
Rsk_3	−0.003	−0.106	−0.119	0.162	0.150	−0.192	0.960

Autn.: autonomy; Inten.: entrepreneurial intention; Innvt.: innovativeness; ILC: internal locus of control; Proact.: proactiveness; Proslv.: problem-solving; Rsk.: risk-taking.

Furthermore, the factor load of each measuring item is greater than 0.7 (Table 2), which implies that it had a proper variable reliability [36]. Eventually, we assessed the convergent validity of the employed measurement scale. The AVE value of all dimensions must be greater than 0.50 to provide a suitable level of convergence validity [36,42]. Table 1 provides the results. All AVE values are more than 0.5, satisfying the convergence validity conditions.

Moreover, by the Fornell–Larker conditions, to obtain adequate discriminant validity, the correlation coefficient values between all factors should be less than the squared root of the AVE [35,36]. Additionally, the squared root of AVE values should not be less than 0.7 [37]. As depicted in Table 1, the diagonal values denote the squared root of the factors AVE, non-diagonal values denote the correlation coefficient between factors, and their numbers match the conditions of good discriminant validity.

3.3. Structural Model Results

Following approving the adequacy of the study measurement model, the structural proposed model was evaluated. Following the recommendations of Hair, Ringle and Sarstedt [36], 5000 repeated bootstrap samples were employed to estimate the path coefficient's significant level. Table 3 and Figure 1 show the path coefficients and corresponding significance p values. As depicted in Figure 1 and presented in Table 3, internal locus of control (as a personality trait) had a positive impact on entrepreneurial intention among healthcare students ($\beta = 0.240$, $t = 4.863$; $p < 0.001$), so H1 was supported. Similarly, innovativeness (as a personality trait) was found to have a positive impact on entrepreneurial intention among healthcare students ($\beta = 0.243$, $t = 4.892$; $p < 0.001$), which confirmed H2. The results also show that autonomy had a significant positive impact on entrepreneurial intention ($\beta = 0.230$, $t = 5.540$; $p < 0.001$), so H3 was supported. This study also showed that proactiveness had a direct and positive impact on entrepreneurial intention ($\beta = 0.161$, $t = 4.034$; $p < 0.001$), so H5 was supported. Furthermore, problem-solving personality dimensions also directly and positively impacted entrepreneurial intention ($\beta = 0.185$, $t = 3.629$; $p < 0.001$), so H5 and H6 were supported. However, risk-taking propensity was

found to have an insignificant negative effect on entrepreneurial intention ($\beta = -0.091$, $t = 1.887$; $p = 0.059$), so H4 was not supported.

Table 3. The research hypotheses.

Hypotheses	Regression Weights	T Statistics	p-Values	Results
Internal locus of control \longrightarrow Entrepreneurial intention	0.240	4.863	0.000	H1, Supported
Innovativeness \longrightarrow Entrepreneurial intention	0.243	4.892	0.000	H2, supported
Autonomy \longrightarrow Entrepreneurial intention	0.230	5.540	0.000	H3, supported
Risk-taking \longrightarrow Entrepreneurial intention	−0.091	1.887	0.059	H4, not supported
Pro-activeness \longrightarrow Entrepreneurial intention	0.161	4.034	0.000	H5, supported
Problem-solving \longrightarrow Entrepreneurial intention	0.185	3.629	0.000	H6, supported

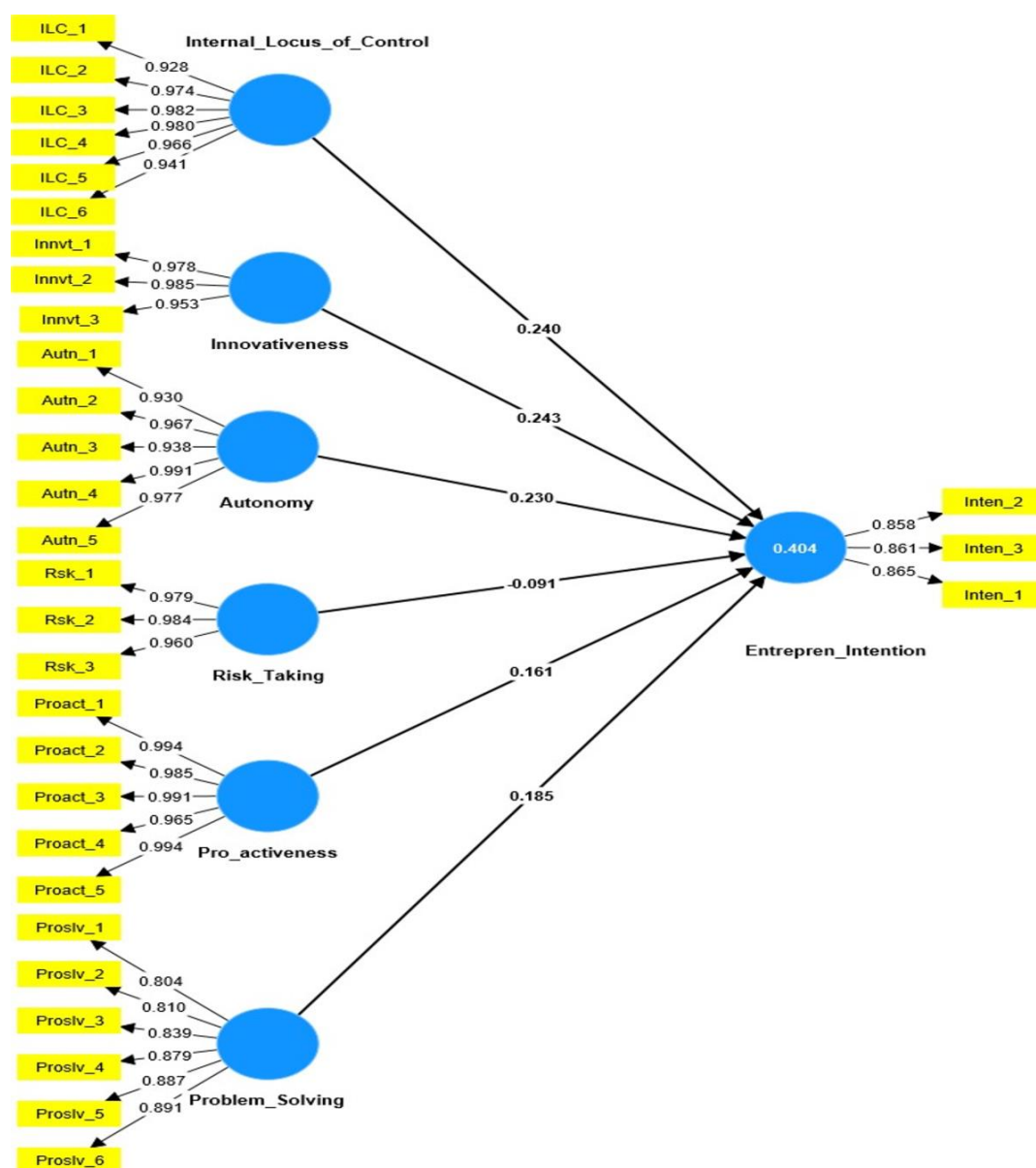


Figure 1. The structural and measurement model.

Additionally, our study assessed the predictive relevance power of Q2. A value of more than 0 suggests that the study model possessed a proper predictive relevance [43,44]. The PLS-SEM outcomes displayed that the Q2 value of entrepreneurial intention is 0.262, which is greater than 0, indicating that the model had a proper predictive relevance power. The determination coefficient R2 can be employed to assess the explanatory power of the proposed model. The greater the value of R2, the greater the model's explanatory power. Falk and Miller [45] suggested that the R2 values of more than 10% have adequate explanatory power. In our study, the R2 value of entrepreneurial intention is 0.404. The R2 in this study has exceeded the suggested level. In general, the proposed model in our study had adequate explanatory power.

Furthermore, a model's goodness of fit (GoF) is also an indicator. Hair, Ringle and Sarstedt [36] suggested that an SRMR lower than 0.05 and an NFI more than 0.90 signifies good fitness. The goodness of fit of the estimated model in our study is 0.049 for the SRMR and 0.964 for the NFI value, indicating that our sample data adequately fitted the proposed model.

4. Discussion

Few studies have encompassed research on entrepreneurial intention and traits among healthcare students and fresh graduates. Thus, numerous suggestions have been developed to restructure the healthcare professions' education and to highlight the ongoing concerns about the ability of the current curricula to prepare and build entrepreneurial traits to achieve innovation, as well as continual enhancement of the healthcare system. Although there have been detectable entrepreneurial activities in some healthcare industry sectors, such as biotechnology, genomics, and pharmaceuticals, these entrepreneurial activities are less recognizable in other sectors, such as the healthcare services' delivery arena [46]. Therefore, several entrepreneurs in this sector may lead to products or processes that will improve healthcare quality, accessibility, and the continuity of the services delivered.

The current study inspected the inspiration of six entrepreneurial personality dimensions on entrepreneurial intention among healthcare students. Firstly, internal locus of control as a personality dimension. The result of the current study showed a substantially positive influence of internal locus of control on entrepreneurial intention among healthcare students. People with a high internal locus of control are capable of controlling as well as managing their lives and are, thus, associated with stronger entrepreneurial intentions. Similarly, earlier studies demonstrated the association between internal locus of control and entrepreneurial intention in healthcare students in different parts of the world, such as Turkey [2], Albania [47], and Ghana [48], among others. Moreover, another study performed in Saudi Arabia showed this positive association between internal locus of control and entrepreneurial intention among non-healthcare Saudi university students [49].

Another personality dimension this study explores innovativeness, which is interrelated with engaging novel ideas or designs to produce new products, facilities, or practices. The outcomes of the current study showed a positive influence of innovativeness on entrepreneurial intention among healthcare students who are potential future entrepreneurs. It is imperative for entrepreneurs to be innovative due to the competitive business landscape [50]. Today's KFU students and fresh graduates, including healthcare students, have plenty of opportunities to innovate. This is because numerous competitions and exhibitions are held at the national and international levels allowing them to explore and share their innovative thoughts.

Autonomy is one of the utmost appreciated motives by entrepreneurs [24]. The prominence of autonomy is recommended by research on entrepreneurial motivation and satisfaction, as well as by a range of societal trends that favor increased self-reliance [51]. The outcomes showed that autonomy substantially affected entrepreneurial intention among Saudi healthcare students in KFU. An earlier study showed a positive relationship between operational autonomy and nurses' entrepreneurial intention, thus emphasizing

the assumption that individuals with greater operational autonomy at work have a higher level of entrepreneurial intention [52].

Proactiveness is a crucial quality required by entrepreneurs to search for entrepreneurship opportunities dynamically. Correspondingly, this experiment disclosed that proactiveness directly and positively impacted entrepreneurial intention. Indeed, Saudi healthcare students should be able to cultivate capabilities in pursuing and acquiring valued entrepreneurial opportunities within the healthcare system. Previously, Nili et al. [53] demonstrated a positive association between proactiveness and the interest in becoming a pharmacist provider among the second- and third-year students of the PharmD program at West Virginia University. These pharmacy students were fascinated by proactively addressing changes in pharmacy practice, and thus, anticipated becoming more involved in emerging trends such as working as a provider. This study displayed that proactiveness had a direct positive impact on entrepreneurial intention.

Furthermore, problem-solving personality dimensions also had a positive influence on entrepreneurial intention. Skills such as critical thinking and problem-solving are indispensable to attain new, sustainable healthcare delivery models, which will positively influence the quality, and cost of patient care. Collaboration, communication, critical thinking, and problem-solving are common in interprofessional care and education models and have been emphasized as essential competencies in healthcare education for many years. Employers in the healthcare system are increasingly seeking graduates capable of solving complex problems [54].

On the other hand, in this study, risk-taking propensity was not a significant factor that affected entrepreneurial intention in healthcare students at KFUPM. An earlier study showed that graduates' contribution to entrepreneurship was rather minimal in the sense that many wished to be employed by organizations rather than to become an entrepreneur [55]. Risk-taking propensity could be regarded as a person's inclination to take risks in decision-making situations, such as being an entrepreneur. This association replicates an affirmative influence of risk tolerance on entrepreneurial choice. Individuals with high-risk tolerance will be more willing to accept a risky behavior, whereas graduates with low-risk acceptance will be inclined to accept low-risk behavior and evade substitutes that may cause the outcome of staying away from their prospects [56]. Entrepreneurship is a process that necessitates entrepreneurs to undertake risk. Thus, a low risk-taking propensity would undeniably deter healthcare students from embracing entrepreneurial accomplishments. Therefore, this low risk-taking propensity will not drive them toward entrepreneurship. For healthcare systems to improve and progress, healthcare schools and organizations must provide a culture that encourages and develops entrepreneurial intention to flourish within the system.

Our study has several theoretical and practical implications. Theoretically, our study contributes to the existing body of knowledge on entrepreneurial intention and how personality dimensions influence it. Moreover, it expands the understanding of how entrepreneurial personality dimensions, such as autonomy, innovation, problem-solving, and proactiveness, influence the intention to start a business in the healthcare sector. The study can also be used to develop a model that predicts entrepreneurial intention among healthcare higher education students based on their entrepreneurial personality dimensions.

Practically, our study can be used by higher education institutions to design entrepreneurial education programs that target specific entrepreneurial personality dimensions to increase the likelihood of students starting businesses in the healthcare sector. Policymakers can also use the study to develop policies and initiatives that support entrepreneurship in the healthcare sector by addressing the specific entrepreneurial personality dimensions of healthcare higher education students. Furthermore, healthcare organizations can use our study to identify potential entrepreneurial employees and develop programs that nurture and support their entrepreneurial intentions. Finally, the study's findings can be used by students to understand their entrepreneurial personality

dimensions and how they might influence their intention to start a business in the healthcare sector. This can help them make informed decisions about their career paths and entrepreneurial endeavors.

5. Limitations and Future Research Opportunities

This study tested and explored only six entrepreneurial personality dimensions and investigated their impact on entrepreneurial intention among healthcare higher education students. However, other personality dimensions can affect entrepreneurship intention, such as agreeableness, conscientiousness, extroversion, neuroticism, and openness to experience. Hence, future studies can be conducted, and the extracted results can be compared with our study results. The study is based on a sample of healthcare higher education students from a single country, and the results may not be generalizable to students from other countries or regions. As a result, extreme caution needs to be exercised before generalizing the findings to all private or public universities. This study only examined direct relationships; however, mediating and moderating variables can be included in future studies, such as students' demographics, i.e., age, gender, and university type. Finally, in order to acquire a deeper and more comprehensive understanding of the tested relationships, additional study methods can be employed, such as a qualitative research approach (interview, focus groups, and observation). Finally, our study does not track the actual outcome of entrepreneurial intention, and it is unclear whether the students who expressed an intention to start a business actually followed through on that intention.

6. Conclusions

The current investigation was conducted to define healthcare university students and fresh graduates' level of entrepreneurial traits. The outcomes specified that healthcare students demonstrated intention towards entrepreneurship and were quite positive towards becoming entrepreneurs. Furthermore, the findings also indicated that university students' entrepreneurial intention was affected by the quality of their proactiveness, innovativeness, internal locus of control, problem-solving, and autonomy. Unfortunately, this study could not detect the positive influence of risk-taking propensity on the entrepreneurial intention of healthcare university students and fresh graduates.

Supplementary Materials: The following supporting information can be downloaded at: <https://www.mdpi.com/article/10.3390/su15032266/s1>, Supplementary File S1: The questionnaire.

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