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PREDICTORS OF YOUNG ENTREPRENEURIALLY-ORIENTED GENERATION

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Abstract

Education is seen as a vital factor of success in the Philippines. One tends to forget that entrepreneurial characteristics such as skills, mindset, and intention are as crucial as education. Students' exposure to social media platforms encouraging entrepreneurship has increased online entrepreneurial activities. The study analyzed the collected data from 122 young and student entrepreneurs. Ordinal regression was utilized in data analysis. This study showed that the low, medium, and high levels of entrepreneurial intention, skills, and mindset are good predictors of each other. A probability that a unit increase in one will increase the other. The result shows the importance of each entrepreneurial characteristic to make entrepreneurially-oriented youth. Other variables used are age, gender, course, and motives. Though age and gender variables were not significant, the study found that opportunity and necessity motivation and achievement, challenges, and learning increase the level of entrepreneurial skills of young entrepreneurs. Business students were found to have a higher entrepreneurial mindset than other student respondents. A recommendation of combining entrepreneurship and education through course offerings and deep engagement in entrepreneurial activities of young potential entrepreneurs could lead to a higher level of entrepreneurial intention, mindset, and skills.

Keywords: student entrepreneurs; generation Z; entrepreneurial mindset; entrepreneurial intention

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1. Introduction

Young minds are always curious and creative. How can we describe young people nowadays? They are divergent and convergent thinkers. They think like entrepreneurs, anticipate problems, and always find solutions. The transformation of entrepreneurship can be significantly aided by an entrepreneurial mindset [1]. Risk-taking and working with others are linked to cultivating an entrepreneurial mindset. Without an entrepreneurial mindset, entrepreneurial skills cannot significantly affect entrepreneurial intention [1].

The interplay between entrepreneurial intention, mindset, and skills has been a focal point of research in entrepreneurship studies. These elements often influence and reinforce each other in complex ways. While the entrepreneurial intention is a self-acknowledged conviction by a person to set up a new business venture [2], the entrepreneurial mindset is described by [3] as a growth-oriented perspective through which individuals promote flexibility, creativity, continuous innovation, and renewal. Entrepreneurial skills refer to the competencies necessary to start, develop, finance, and succeed in one's own enterprise [4]. These three are interconnected factors that play a crucial role in entrepreneurial behavior.

Students regard the generation of personal income as the business activity's most significant reward but find the lack of knowledge an obstacle to engaging in a business [5]. Even if students lack business knowledge, they still engage in entrepreneurial

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activities to fulfill their passion, gain experience, and generate income [6].

Challenge-based learning programs significantly impact students' entrepreneurial mindset and skills, specifically financial education, planning, and creativity [7]. Other universities in the Philippines employ entrepreneurial challenge-based programs for business students only. Other majors do not include like-approached programs, which may be a factor in the mindset and skill of young entrepreneurs. Business majors, those in related professions like education and information technology, and even senior high school students are engaged in business activities.

Students' entrepreneurial intentions and self-efficacy are stronger after receiving more entrepreneurship education than after participating in practicals [8]. Entrepreneurial awareness and skills are improved through teaching methods, including operating an actual business, visiting a business location, and conducting an entrepreneur interview [9].

Businesses and entrepreneurial skills are essential in youth employment [10]. Entrepreneurial skills are methods that entrepreneurs can employ in unpredictable settings to produce positive results. Skills develop high entrepreneurial intention. [11].

Age has been found to have a complex relationship with entrepreneurial intention. [12] proposed that as individuals age, they become less likely to choose self-employment due to the opportunity cost of time. However, [13] found that the relationship between age and entrepreneurial activity is U-shaped, that both young and old individuals show a higher propensity for entrepreneurship.

Motivations for entrepreneurship can vary. Opportunity-driven entrepreneurship is more likely to encourage opportunity than necessity-driven business [14]. [15] provide evidence to support the expectation that growth-oriented entrepreneurs will exhibit increased intrinsic motivation.

Various studies on entrepreneurship targeting business students as respondents have already been done. This study's objective is to broaden its focus and examine the viewpoints of other students from various academic disciplines and levels of analysis.

In the article published by inc.com, Generation Z was described as entrepreneurially oriented. They are getting themselves into business. The results of this study will show whether entrepreneurial mindset and skill levels can predict low, medium, and high entrepreneurial intention levels. Another objective is to show that entrepreneurial intention and mentality can predict entrepreneurial skill levels and entrepreneurial skill levels can predict entrepreneurial mindset. Other predictors or independent variables used were age, gender, course, and motives.

2. MATERIALS AND METHODS

Data were analyzed using logistic regression because the Relational Screening Model was used in the investigation. Its main goal is to create a valid model that describes the link between the predictor and the predicted variables.

As shown in Fig. 1, the dependent variables used in this study are entrepreneurial intention, skills, and mindset. These variables were also used as predictors of each other. Other predictors were age, gender, course, and motives.

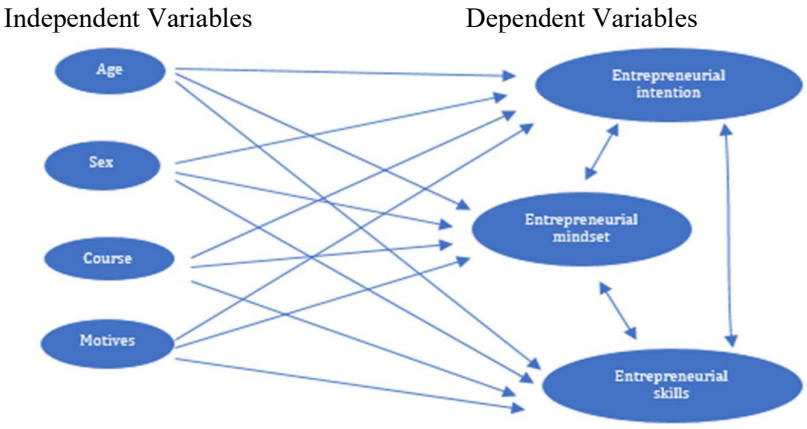

Fig. 1. Conceptual Framework

2.1 Data Gathering Instrument

The survey questions were adapted from the developed instrument by Moberg et al. [16]. The seven-point Likert scale was utilized to create a specific set of items to examine each entrepreneurial characteristic. The variables and domains of the study are shown in table 1.

The entrepreneurial mindset consists of 8 items with two factors (entrepreneurial mindset and core self-evaluation). Entrepreneurial skills comprised 22 items with six elements (creativity, planning, financial education or literacy, managing resources, managing ambiguity, and entrepreneurial knowledge). Lastly, entrepreneurial intention consists of 3 items with one factor. Reliability coefficients are the following: 0.895 for an entrepreneurial mindset, 0.711 for core self-evaluation, 0.849 for creativity, 0.905 for planning, 0.860 for financial literacy, 0.856 for managing resources, 0.852 for managing ambiguity, 0.610 for entrepreneurial knowledge, and 0.809 for entrepreneurial intention. The overall scale of reliability are 0.845. These figures show a good fit value of scale.

Table 1. Variables, their domains, and reliability coefficients

Domain	**Variable**	**Cronbach's α**
Mindset	Entrepreneurial Mindset	0.895
	Core Self-Evaluation 0.711	
Entrepreneurial Skills	Creativity	0.849
	Planning 0.905	
	Financial Literacy 0.860	
	Managing of Resources 0.856	
	Managing Ambiguity 0.852	
	Entrepreneurial Knowledge 0.610	
Intention	Entrepreneurial Intentions	0.809
Overall		0.845

Many sorts of entrepreneurial motivation are additional independent variables. According to [17], types of entrepreneurial motivation include the following:

1. Opportunity and necessity motivation – also called push-pull. It recognizes that sometimes choosing to be an entrepreneur is a matter of need and opportunity.
2. Achievement, challenge, and learning – This dimension encapsulates a desire to achieve oneself via entrepreneurship.
3. Independence and autonomy – This aspect emphasizes the entrepreneurial motivation to have autonomy over one's time and work, the ability to make independent judgments, and the flexibility to balance work and family life.
4. Financial success and secured income – This factor adequately expresses the significance of entrepreneurship's economic gains.
5. Recognition and status – This dimension includes social status-related factors, including the desire to be respected and acknowledged for one's entrepreneurial efforts by friends, family, and the larger community.
6. Family and roles – This dimension encapsulates the urge to uphold family traditions and emulate other role models.

2.2 Participants and Procedures

The researcher approached student entrepreneurs from different fields of study. Data from the participants were gathered using the direct interview method. The method was used to explain further some of the business terms that the other participants may not know or are not familiar with. Online student entrepreneurs were selected and identified through social media if they were engaged in entrepreneurial activities such as marketing and selling different products. Others not involved in online entrepreneurial activities were asked if they were into business ventures before they were interviewed.

A purposive sampling technique was used. Respondents were selected for the purpose of entrepreneurial activity engagement. Eighty-five college students from Romblon State University – Romblon campus and 37 senior high school students in Romblon island, province of Romblon, have been identified and willingly participated in the study. Their mean age is 22 years old. Females made up 75.4 percent (N=92), while males made up 24.6 percent (N=30) (Table 1). The respondents have five groups of entrepreneurs from different fields of study: 25.4 percent (N=31) from business, 9.8 percent (N=12) from information technology, 34.5 percent (N=42) from education, and 30.3 percent (N=37) from senior high school. Motives for engaging in entrepreneurial activities were also asked. Their primary reason or justification is for opportunity and necessity motivation at 51.6 percent (63); followed by income security and financial success at 13.9 percent (17); achievement, challenging, and learning at 12.3 percent (15); independence and autonomy at 10.7 percent (13); family and roles at 6.6 percent (8); and others at 4.9 percent (6). The data were gathered using a survey questionnaire, and a direct interview was conducted to further explain the instrument's contents. SPSS was used to examine the data collected. Informed consent was initially discussed with them, and the data gathered would be treated with confidentiality.

Table 2. Demographic Profile
(N=122)

Profile	Frequency	Percentage
Gender		
Male	30	24.6
Female	92	75.4
Course		
Business	31	25.4
Information technology	12	9.8
Education	42	34.5
Senior High	37	30.3
Motives		
Opportunity and Necessity Motivation	63	51.6
Achievement, challenge, and Learning	15	12.3
Independence and Autonomy	13	10.7
Financial Success and Secured Income	17	13.9
Family and Roles	8	6.6
. Others	6	4.9

2.3 Data Analysis

In ordinal regression analysis, a series of assumptions must be made before analyzing the data in SPSS. The initial presumption is that the independent variables must be continuous, ordinal, or categorical, whereas the dependent variable is assessed at the ordinal level. If independent variables are ordinal, they should be treated as continuous or categorical. The variables in this study have passed these first two assumptions. The dependent variables, entrepreneurial intention, entrepreneurial skills, and entrepreneurial mindset, were transformed into discrete variables with low, medium, and high levels.

A multicollinearity test was conducted since a logistic regression analysis is sensitive to significant correlations between independent variables. The method also applies to dependent variables. Tolerance and Variance Inflation Factors were measured to validate the assumption. In examining multicollinearity problems between variables, the assumption is validated.

In Table 3, the tolerance values were all more than 0.02. They were as follows: 0.853 for age, 0.929 for gender, 0.759 for the course, 0.876 for reasons, 0.709 for an entrepreneurial mentality, and 0.760 for entrepreneurial skills. Age, gender, course, motives, entrepreneurial attitude, and talents all had VIF values of 1.172, 1.410, 1.316, 1.142, and 1.317, all of which were less than 10. Multicollinearity assumptions for this study were validated.

Table 3. Results of Multicollinearity Assumptions

Variables	Tolerance	VIF
Age	0.853	1.172
Gender	0.929	1.410
Course	0.759	1.316
Motives	0.876	1.142
Entrepreneurial Mindset	0.709	1.077
Entrepreneurial Skills	0.760	1.317

Parallelism is another essential assumption in ordinal regression analysis. The chi-square test was performed to satisfy the assumption of parallelism. The following table shows the results.

Table 4. Parallelism Assumptions Results

Entrepreneurial intention as a dependent variable				
Model 1	**-2 Likelihood (-2LL)**	**x^2**	**df**	**p**
Null Hypothesis	118.824			
General	116.709	2.115	6	0.909
Entrepreneurial skill as a dependent variable				
Model 2				
Null Hypothesis	172.456			
General	162.483	9.973	12	0.618
Entrepreneurial mindset as a dependent variable				
Model 3				
Null Hypothesis	174.440			
General	150.126	24.314	12	0.018

The chi-square test for models 1 and 2 (x^2 = 2.115, $p > 0.05$) demonstrates that the parallelism assumption is confirmed and tested. For model 2, $x^2 = 9.973$, $p > 0.05$. However, for Model 3, the p-value result is insignificant (x^2 = 24.314, $p < 0.05$). The outcome indicates that the parallelism assumption is valid, and the null hypothesis is confirmed. The result also demonstrates parity between each category of the dependent variables, entrepreneurial intention, and entrepreneurial competence. Though Model 3 did not pass this assumption, Ordinal Regression Analysis was still applied to all models.

3. RESULTS AND DISCUSSION

The results of the ordinal regression analysis are covered in this section. The 2-log likelihood (-2LL) values for the models developed without independent variables and those discovered with independent variables are shown in the analysis's model fitness information table.

Table 5. Model Fit Information

Model 1	**-2 Log Likelihood**	**Chi-Square**	**df**	**p**
Only the intercept	165.654			
Final	118.824	46.830	6	0.000
Model 2				
Only Intercept	235.354			
Final	172.456	62.897	12	0.000
Model 3				
Only Intercept	223.836			
Final	174.440	49.396	12	0.000

By comparing the model created with the independent variables to the baseline model without the independent variables, a substantial change could be seen in Table 5, Model 1 (x^2 = 165.654 – 118.824 = 46.830, $p < 0.05$), Model 2 (x^2 = 235.354 – 172.456 = 62.897, $p < 0.05$), Model 3 (x^2 = 223.836 – 174.440 = 49.396, $p < 0.05$). The findings show that the dependent variable and the independent factors do have a relationship. The goodness to fit was examined at another stage. Pearson assesses the model's data fit using the chi-square and deviation statistics and the discrepancy between the actual and expected values.

Table 6. Goodness-of-Fit

Model 1	**X^2**	**df**	**p**
Pearson	86.395	68	0.066
Deviance	76.464	68	0.225
Model 2			
Pearson	183.067	188	0.588
Deviance	166.676	188	0.866
Model 3			
Pearson	179.741	184	0.575
Deviance	166.122	184	0.824

Examining table 6, Pearson's chi-square value for Model 1 (x^2 = 86.395, $p > 0.05$) and Deviance chi-square value (x^2 = 76.464, $p > 0.05$), Model 2 (x^2 = 183.067, $p > 0.05$) and Deviance chi-square (x^2 = 166.676, $p > 0.05$), Model 3 (x^2 = 179.741, $p > 0.05$), and Deviance chi-square (x^2 = 166.122, $p > 0.05$) were insignificant. The outcome indicates that the null hypothesis was confirmed and that the model accurately describes the data.

Pseudo-R^2 values evaluated the model's accuracy of fit. Measurement and evaluation of the strength of the relationship between the dependent and independent variables are the goals of pseudo-R^2. The most popular statistics are the McFadden, Cox-Snell, and Nagelkerke R^2 measures.

Table 7. Pseudo-R2 Value

	Cox and Snell	**Nagelkerke**	**MacFadden**
Model 1	0.319	0.364	0.183
Model 2	0.403	0.467	0.260
Model 3	0.333	0.391	0.213

As shown by Cox-Snell, Nagelkerke, and MacFadden statistics, the pseudo-R2 values for Model 1 were 0.319, 0.364, and 0.183, respectively, as shown in Table 7. The pseudo-R2 values for Model 2 are 0.403, 0.467, and 0.260, while those for Model 3 are 0.333, 0.391, and 0.213. The Nagelkerke value is considered even if the Cox-Snell pseudo-R2 value interpretation is complicated. These numbers demonstrate that the independent factors account for a significant portion of the dependent variable. The results were 36.4% for Model 1, 46.7% for Model 2, and 39.1% for Model 3. Although many additional factors may impact entrepreneurial goals, mentality, and abilities, they were only considered for the sake of this study, along with factors like age, gender, and course.

Independent variables are significant, as shown by the Wald test results. The logistic

regression study can be finished with no-biased and divergent parameter findings by testing the results using Wald statistics. The Wald exponential was obtained to interpret the model and determine the odds ratio.

Table 8. Expression of the Significance of the Model Parameters

Variables		β	Wald	Odds Ratio	p
A. Model 1					
Entrepreneurial Intention	1 (Low)	1.724	6.236		0.013
	2 (Medium)	4.206	28. 407		0.000
Entrepreneurial Skills		1.078	10.137	2.93879	0.001
Entrepreneurial Mindset		0.782	4.948	2.18584	0.026
B. Model 2					
Entrepreneurial Skills	1 (Low)	4.852	8.392		0.004
	2 (Medium)	8.716	22.183		0.000
Opportunity and Necessity Motivation		2.492	4.437	12.0854	0.035
Achievement, challenging, and learning		2.691	4.401	14.7464	0.036
No clear motive		0a			
Entrepreneurial Intention		1.195	12.429	3.30355	0.000
Entrepreneurial Mindset		1.076	8.520	2.93292	0.004
C. Model 3					
Entrepreneurial Mindset	1 (Low)	3.247	4.658		0.031
	2 (Medium)	6.822	17.984		0.000
Business Students		1.789	8.079	5.98346	0.004
Senior High School (HUMMS)		0a			
Entrepreneurial Skill		1.114	8.826	3.04652	0.003
Entrepreneurial Intention		0.673	4.245	1.96010	0.039

Entrepreneurial intention is significantly influenced by entrepreneurial skills (p=0.001) and entrepreneurial mindset (p=0.026) for Model 1, as shown in Table 8. However, regarding predicting entrepreneurial intention, age, gender, course, and motivation were irrelevant. The interpretation according to the odds ratio is another method of investigating parameter significance. The likelihood of having a high level of entrepreneurial intention increases by 1.078 units for every unit increase in the entrepreneurial skill variable. When the odds ratio for entrepreneurial skills is considered, it can be observed that the odds ratio was 2.93879, which is greater than 1. The findings show that an increase of one unit in entrepreneurial skill multiplies the intention to start a business by 2.94. Also, the likelihood of entrepreneurial intention increases by 0.782 units for every unit higher in young entrepreneurs' entrepreneurial skills. A closer look at the odds ratio for the entrepreneurial mindset reveals that it was 2.18584, which is greater than one. Moreover, a one-unit increase in the young entrepreneurs' entrepreneurial mindset variable boosts the amount of entrepreneurial intention 2.19 times.

Results for Model 2 reveal that motives in engaging in entrepreneurial activities such as opportunity and necessity motivation (p = 0.035), achievement challenges, and learning (p = 0.036) were significant. The same results were also significant for entrepreneurial intention (p = 0.000) and entrepreneurial mindset (p = 0.004). A one-unit increase in opportunity and necessity motivation of young entrepreneurs increases the probability of entrepreneurial skills by 2.492 units more than those with no clear intention. The same goes for achievement, challenge, and learning

motivation, which will increase the probability of entrepreneurial skills by 2.691 units. Entrepreneurial intention and entrepreneurial mindset will also increase the likelihood of entrepreneurial skills by 1.195 and 1.076, respectively. When opportunity and necessity motivation, achievement, challenge, and learning are considered, the odds ratio was 12.0854 and 14.7464, which is greater than one. The result means that one-unit increase in opportunity and necessity motivation and achievement, challenge, and learning of the young entrepreneurs increases entrepreneurial skills by 12.08 and 14.75 times.

According to the study, business students are significant for Model 3 findings ($p = 0.004$). Moreover, results for entrepreneurial skills ($p=0.003$) and entrepreneurial intention ($p=0.039$) were significant. This study found that business students were 1.789 more likely than senior high school students to have a strong entrepreneurial mindset. When the odds ratio for the course variable is considered, it is clear that the odds ratio is greater than one. Business students had an entrepreneurial mindset of 5.98 times greater than senior high school students. However, the chance of having an entrepreneurial mindset and intention increases by 1.114 and 0.673 units for every unit increase in an entrepreneurial skill. A unit increase in entrepreneurial skills boosts entrepreneurial mindset 3.05 times, according to the odds ratio of 3.04652. A one-unit rise in entrepreneurial intention raises the degree of entrepreneurial mindset 1.96 times, considering the odds ratio of the entrepreneurial intention of 1.96.

According to research by [18], [19], [20], [21], and [22], having an entrepreneurial mindset and intention are positively correlated with starting a business. An entrepreneurial mindset has been identified as a key predictor of entrepreneurial intention. From [23]'s finding, individuals with a growth mindset are more likely to persist in entrepreneurial endeavors. This study also supports the claim that an increase in entrepreneurial mindset also increases the level of the entrepreneurial intention of young entrepreneurs. Moreover, entrepreneurial knowledge or skills also increase the level of entrepreneurial intention. Entrepreneurial knowledge and skills positively impact entrepreneurial intention. The study's respondents are in school and have gained knowledge of abilities like planning, managing resources, and financial literacy through schooling. According to [24], business owners with entrepreneurial skills and knowledge see increased entrepreneurial intention and capital when running their companies. Certain skills are associated with higher entrepreneurial intention. [25] found that digital skills, in particular, are increasingly important for entrepreneurial success in the modern economy. Young entrepreneurs nowadays have been exposed to social media and other online platforms, where they can conduct entrepreneurial activities such as marketing and selling products. Maximizing their digital skills could result in more successful entrepreneurial ventures.

Looking at the results of Model 2, opportunity and necessity motivation enhances the degree of entrepreneurial skills of young entrepreneurs This contradicts the study by [26] that found that these motivations are linked to lower levels of entrepreneurship. Another researcher also supported the findings of this investigation. In times of high unemployment and economic recession, opportunity and necessity entrepreneurs will likely have higher average entrepreneurial skills [16]. The study also demonstrates that other forms of entrepreneurial motivation that enhance entrepreneurial abilities include achievement, challenge, and learning [27]. Self-determination theory has been applied to entrepreneurship, suggesting that intrinsic motivation leads to more sustainable entrepreneurial efforts [28]. According to different studies [29]; [30], starting and running a firm may result in changes in skill and motivation, and entrepreneurs may develop entrepreneurial abilities that affect their

motivation [17]. The motivation for most of these young entrepreneurs' engagement in entrepreneurial activities is to help their families and support their studies. These reasons could help unemployment problems in the community. As the phrase goes, "Necessity is the mother of invention", the way these young entrepreneurs find ways to have financial freedom and help themselves would see potential successful business owners in the province.

The field of study or the course can significantly influence entrepreneurial orientation. Business students' educational backgrounds directly influence their entrepreneurial intention [31]. [32] found that business students showed higher entrepreneurial intentions than those in other fields. [33] also noted that the effect of entrepreneurial education on entrepreneurial intention was stronger for business students. The result of this study also supports the claim that being a business student increases the entrepreneurial mindset. Business students' exposure to subjects related to entrepreneurship has widened their entrepreneurial subjectivity and enhanced their entrepreneurial mindset.

4. CONCLUSION

In the Philippines, a small amount of work is being done to examine youth entrepreneurship scientifically. So, this study closes this knowledge gap and advances our understanding of entrepreneurship, particularly that of young people. Younger generations' entrepreneurial traits have demonstrated such great potential for development. Thanks to social media platforms that support online entrepreneurship, many students are now more eager to participate in entrepreneurial activity, even on a small scale. According to the study's essential findings; entrepreneurial intention, abilities, and mindset are all indicators of one another in young entrepreneurs. One grows by one with every unit increase. Additional important aspects were the course, particularly the business students, motivations like opportunity and necessity motivation, as well as their achievement, challenge, and learning.

Students are increasingly being exposed to technology at an increasing rate, which increases interest in entrepreneurial activity. Entrepreneurship is one form of self-employment that can aid in economic progress. The findings of this study advocate delivering entrepreneurial education classes to boost students' interest in entrepreneurship and increase their entrepreneurial skills, mentality, and intention. The adage goes, "Don't just give them fish; teach them how to fish."

The study shows interesting results that could boost and encourage entrepreneurship in the province, especially for the younger generation. The researcher suggests that the university conduct a feasibility study, review, and consider offering a course directly related to entrepreneurship. Entrepreneurial education could encourage more students to consider entrepreneurial ventures than directly being employed.

This study has a limitation. Perceptions usually differ from reality, and statistical problems like standard method variance and response trends may impact self-reported measurements. Yet, the study's findings confirm and refute those of other studies.

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