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The Relationship Between Attention Deficit Hyperactivity Disorder Symptoms and Academic Self-Efficacy Levels of University Students

Üniversite Öğrencilerinde Dikkat Eksikliği ve Hiperaktivite Belirtileri ile Akademik Öz-Yeterlik Arasındaki İlişki

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ABSTRACT

Introduction: Our aim in doing this study; It is to determine the academic self-efficacy levels of university students with ADHD symptoms.
Methods: The population of the study consisted of students from 3 universities in the eastern, southeastern and central regions of Turkey and n= 1704. In the study; descriptive form, Adult Attention Deficit Hyperactivity Disorder Self-Report Scale (YDEÖD), Academic Self-Efficacy Scale (ASE) tools were used.
Results: It was found that LCILD was a good predictor of AFE [46% and (F = 47.038; p <0.05; Adjusted *R*2= 0.46)]. In addition, a moderately negative correlation was found statistically between RCILD and its sub-dimensions and AFE.
Conclusion: In the study, it was found that YDEÖH scores decreased significantly with age. This finding seems to be compatible with the literature. The finding that LCILD and its sub-dimensions are important predictors of FSI is also supported by the literature. There is a moderately negative relationship between LLBW and its sub-dimensions and LCI, and it is an important predictor of LCILD and its sub-dimensions, explaining almost half of LCI.

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ÖZET

Giriş: Bizim bu çalışmayı yapmaktaki amacımız; DEHB belirtileri gösteren üniversite öğrencilerinin akademik öz yeterlilik düzeylerinin belirlenmesidir.
Yöntem: Çalışmanın evrenini Türkiye'nin doğusu, Güneydoğusu ve Orta bölgelerinde bulunan 3 üniversitenin öğrencileri oluşturmuştur ve n= 1704'dür. Çalışmada; tanımlayıcı form, Erişkin Dikkat Eksikliği ve Hiperaktivite Bozukluğu Kendi Bildirim Ölçeği (YDEÖH), Academic Self-Efficacy Scale (ASE) araçları kullanılmıştır.
Bulgular: YDEÖH'ün ASE için iyi bir yordayıcı olduğu [%46 ve (F = 47.038; p <0.05; Adjusted R^2= 0.46)] bulunmuştur. Ayrıca¸ YDEÖH ve alt boyutları ile ASE arasında istatistiksel açıdan negatif yönde orta düzeyde bir ilişki bulunmuştur.
Sonuç: Çalışmada YDEÖH puanlarının yaş ile anlamlı olarak azaldığı bulunmuştur.Bu bulgu literatür ile uyumlu görünmektedir. YDEÖH ve alt boyutlarının ise ASE için önemli bir yordayıcı olduğu bulgusu da yine literatür tarafından desteklenmektedir. YDEÖH ve alt boyutları ile ASE arasında negatif yönlü orta düzeyde bir ilişki bulunmaktadır ve YDEÖH ile alt boyutları ASE'nin neredeyse yarısını açıklayan önemli bir yordayıcıdır.

1. Introduction

Attention Deficit Hyperactivity Disorder (ADHD) is described as a neurodevelopmental disorder, accompanied by attention deficit, impulsive behaviors, and hyperactivity. A vast majority (about two-thirds) of individuals diagnosed with ADHD has to cope with this disorder for life (1). Until the 1990s, it used to be widely and predominantly known as a children's disorder (2). Despite the prevalence of studies in children, it is clearly a lifelong disorder, even continuing into university life (3). According to research conducted in the United States, 6% of college students have ADHD, and this rate indicates ADHD to be the most common disorder among college students (4).

ADHD is likely to worsen due to environmental conditions. Environmental problems experienced by university students (surging responsibility for studying, loneliness, distance from the familiar environment they are used to, and so on) contribute to a more stressful medium and being individually more stress-filled individuals. This further aggravates ADHD symptoms among university students (5-7). University students with ADHD symptoms, unlike other students, reportedly prefer an environment

with lower academic achievement. The primary reason they choose such an environment is attributed to frequent distractions (8). Today, individuals apparently tend to receive a 4-year university education to find a job with a higher status and career. Thus, having ADHD symptoms or diagnosis is a substantial determinant for not having a university degree.

The Grade Point Average (GPA) is created particularly for success evaluation during university. Thus, it is a primary instrument indicating how the success of a university student with ADHD symptoms or diagnosis changes from the 1st grade to the 4th. Yet, aggravating the ADHD symptoms, GPA puts considerable stress on the student because GPA scores are considered to explain the changes in other indications (such as managing the individual economy, developing social relationships, and making close friends) of a student with ADHD (9,10). High academic self-efficacy (ASE) requires essential acquisitions, such as success motivation and goal orientation. Then, ASE denotes integration into the academic climate, adequate and continuous study skills, besides competent classroom performance (10). A systematic review by Stevens et al. in 2020 revealed a negative and close correlation between ADHD symptoms and ASE (8). The study by Dovorsky et al. in 2014, conducted with college students with ADHD, noted that ADHD symptoms damaged daily functions and organizational skills, thus causing academic failure (11). Under those circumstances, the university students who feel unsuccessful start to perceive themselves as academically inadequate after a while, along with the psychosocial problems they face (7).

ADHD exposes adult students to some risks in terms of academic achievement. This achievement emerges within the ASE concept through the functional development in social life offered by the academy, where the student feels competent in the classroom. The ASE development remarkably co-exists with the regression of ADHD symptoms and the student's life quality. In this context, the present study aims to determine the academic self-efficacy levels of university students indicating ADHD symptoms.

2. Methods

2.1. Design of the study

The research was conducted as a descriptive cross-sectional study between the dates of 15.10.2019 and 20.02.2020. The study aims to determine the academic self-efficacy levels of university students indicating ADHD symptoms.

2.2. Sample

Due to the exploratory nature of the present study, a formal sample size method was not applied. While applying the multiple regression analysis method to measure the estimated sample size, the researchers adhered to the principle of having at least ten observations per independent variable to calculate the effect size. Under the inclusion and exclusion criteria, a total of 1704 university students participated in the study. Inclusion criteria was specified as follows: 1) Registry as a student at one of the hosting institutions (Adıyaman, Çankırı Karatekin, and İnönü universities), 2) Digital access to specified Google Forms document through membership in the relevant WhatsApp group of the mentioned institutions, 3) Hit on the approval button on notification of consent as an attendee student, and 4) No diagnosis of defined comorbid psychiatric other than ADHD or any physical disease. Regarding the fourth criterion, before applying the scales and descriptive form, the researchers asked the participants if they had any physiological disease impacting their mental or academic life. Then, those who answered yes were asked what diagnosis they had, and thus the research sample was finalized.

2.3. Ethical considerations

In order to conduct the research, written permission was obtained from the Non-Interventional Research Ethics Committee of the relevant university, with the ethics committee decision dated 17.09.2019 and numbered 2019/348. At the onset of the online study, requisite explanations were made, and written informed consent was obtained from the participants. The study was conducted in line with the ethical rules enshrined by the Declaration of Helsinki Principles.

2.4. Measurements

Using scales assigned for this study was ensured by obtaining permission from the researchers who previously proved the validity and reliability of those scales. Cronbach's alpha coefficient for all scales applied in this study was > 0.70.

Descriptive Form: Created by the researchers and containing 13 questions for university students, the descriptive form included questions regarding their age, grade, and the institute/department they studied, whether any family member had a mental disorder, their socioeconomic status, and their birth order in the family.

Adult Attention Deficit Hyperactivity Disorder Scale (Adult ADHD Scale): The scale comprised the 'Attention Deficit', 'Hyperactivity and Impulsivity', and 'Problem' sections, including other ADHD-related problems. The Adult Attention Deficit Hyperactivity Disorder (Adult ADHD Scale) scale was devised in 1995 by A. Turgay in Canada. A five-point Likert scale was used and gathered under three main headings. The first part of the scale was adopted from the symptoms and results of attention deficit (AD) written in the fifth edition of the 'Diagnostic and Statistical Manual of Mental Disorders Manual' (DSM-5). The second part was 'hyperactivity

and impulsiveness' and the third was the 'problem' related to attention deficit and hyperactivity. Regarding the overall score, the scale was finalized such that the scores below 20 connoted a low level of attention deficit (AD); between 20 and 59 indicated moderate ADHD; above 59 implied a high level of ADHD (34). In the present study, Cronbach's alpha coefficient was 0.91. The Turkish validity and reliability study of the Adult ADHD was conducted by Doğan et al. (35) and in another study conducted as a follow-up to this study, the cut-off point of the Adult ADHD scale was found to be 46 (36).

Academic Self-Efficacy (ASE) Scale: The main aim of the ASE Scale, developed by Jerusalem and Schwarzer in 1981, was to ascertain university students' academic efficacy through their self-judgments. The coefficient alpha value in the original scale was 0.85 (33). It was adapted to Turkish by Yılmaz et al. in 2007. That version included 7 items like the original one and had a Cronbach's alpha reliability value of 0.79 (13). The study by Kandemir in 2014 covered university students and transformed the scale into a 19-item scale with a 5-point Likert scale (from 1: strongly disagree to 5: strongly agree), splitting into three sub-dimensions: 1) academic effort, 2) academic coping, and 3) academic planning (12). In the present study, the alpha value of the scale was 0.93.

2.5. Data collection

Upon the ethics committee's approval, the data collection occurred on a voluntary basis through the Informed Consent Form, Introductory Information Form, and questions in the scales, which were prepared by using 'Google Forms' and shared on 'WhatsApp' student groups created by advisors [of nursing, paramedics, home patient care, elderly care, midwifery, health management branches in the universities and various departments of vocational schools of higher education (mechanics, electrics, tourism, and hotel management) covered by the research], to explain the research aim and to include the well-suited participants.

2.6. Statistical analysis

Survey data were assessed through SPSS for Windows 25.0 (SPSS Inc, Chicago, IL). The conformity of the variables to the normal distribution was analyzed using visual (histogram) and analytical methods (Kolmogorov-Smirnov/Shapiro-Wilk Tests). Descriptive statistics were rendered as mean (±) standard deviation, median (minimum-maximum), frequency distribution, and percentage. T-tests were employed in independent groups to compare sociodemographic characteristics and scales. Spearman's correlation and hierarchical regression analysis were performed to analyze the sub-dimension and total score relationships of the scales.

3. Results

Statistical analysis of the university students' descriptive characteristics indicated that 58.92% of them were female; 43% studied nursing; parents of 81.92% lived together; 65.66% had a family history of mental disorder diagnosis; 82.10% were never diagnosed with any mental disorder; 38.38% evaluated their earlier school success at the medium level (Table 1).

Table 1. Data on descriptive characteristics of university students (n=1704)

Individual Characteristics	n	%
Age		
17-20	910	53.40
21-23	532	31.23
24 and above	262	15.37
Gender		
Female	1004	58.92
Male	700	41.08
Branch		
Nursing	741	43.48
Midwifery	152	8.92
Vocational School of Higher Education*	101	5.93
Faculty of Science and Literature**	180	10.56
Nutrition and Dietetics	74	4.34
Emergency and First Aid	162	9.51
In-Home Patient Care	170	9.98
Child Development	124	7.28
Marital status		
Married	1396	81.92
Divorced	308	18.08
Family history of mental disorder		
Yes	587	34.34
None	1117	65.66
Diagnosed with any mental illness		
Yes	305	17.90
No	1399	82.10
How would you evaluate your school success in the past?		
Poor	283	16.60
Fair	654	38.38
Good	215	12.62
Very Good	552	32.40
Total	**1704**	**100**

*Electrics, Business Administration, Firefighting, Computer Programming, Private Security, Social Security **Biology, Physics, Chemistry, Sociology, Literature, History, Psychology

The mean of the Adult ADHD Scale was 54.12±25.54, and the mean values for the sub-scales of Attention Deficit, Hyperactivity-and-Impulsivity, and Problem successively ranged between 17.33±9.76, 9.66±3.31, and 16.21±9.60. The overall mean score on the ASE scale was determined to be 61.17±17.09 (Table 2).

Table 2. Scale and subscale mean scores of university students (n=1704)

Scales	Mean	SD
Adult Attention Deficit Hyperactivity Disorder Scale (Adult ADHD Scale)	54.12	25.54
Attention Deficit	17.33	9.76
Hyperactivity, Impulsivity	9.66	3.31
Problem	16.21	9.60
Academic Self-Efficacy Scale (ASE)	**61.17**	**17.09**

All scales and sub-dimensions had a Cronbach's Alpha of over 0.70, which corresponded to an acceptable internal consistency. In the research, there is a statistically significant, moderate negative correlation between Adult ADHD Scale and ASE scales, just as the statistically significant, moderate negative correlation between the Adult ADHD Scale subscales and ASE (p<0.01) (Table 3).

Table 3. The relation of adult ADHD scale and its subscales with ASE (n=1704)

	p	α	1	2	3	4	5
Adult ADHD Scale	<0.01	0.91	1				
Attention Deficit	<0.01	0.84	0.749[a]	1			
Hyperactivity, Impulsivity	<0.01	0.82	0.689[a]	0.522[a]	1		
Problem	<0.01	0.86	0.934[a]	0.593[a]	0.528[a]	1	
ASE	<0.01	0.93	-0.511[a]	-0.504[a]	-0.506[a]	-0.510[a]	1

a: Spearman Correlation (rho) is significant at the 0.01 level

The independent sample t-test analysis in Table 4 implied that the students aged between 17-20, attending vocational school of higher education programs, having poor school success, with parents divorced, and with a diagnosis of any mental disorder had higher Adult ADHD Scale Scores (p<0.05) (Table 4).

Table 4. Univariate analyses of the factors associated with the adult ADHD scale and ASE (n=1704)

Variables	Adult ADHD Scale			ASE		
	Mean (SD)	t/F	p	Mean (SD)	t/F	p
Age						
17–20	68.31 (21.43)			66.81 (18.71)		
21-23	60.58 (21.56)	5.219	0.004[a]	68.28 (20.65)	0.493	0.612[a]
24 and above	62.19 (22.42)			54.16 (20.72)		
With respect to the program/faculty attended						
Nursing	60.38 (24.54)			52.55 (23.36)		
Midwifery	61.31 (21.14)			55.66 (21.04)		
Vocational School of Higher		3.302	0.050[a]		0.462	0.712[a]
Education Programs	66.03 (20.50)			57.20 (19.29)		
Science and Literature Programs	62.14 (20.93)			57.59 (18.57)		
With respect to school success						
Poor	62.78 (22.12)			60.96 (17.32)		
Fair	64.50 (21.03)	3.025	0.050[a]	56.74 (19.96)	-0.532	0.599[a]
Good	50.57 (18.55)			45.57 (17.90)		
Very Good	36.23 (15.98)			34.38 (14.36)		
With respect to the way the economic situation is perceived						
High	67.79 (17.19)			55.36 (19.46)		
Middle	62.93 (22.35)	1.948	0.148[a]	57.38 (19.19)	0.498	0.608[a]
Low	55.91 (18.02)			52.88 (24.32)		
With respect to whether parents are married or divorced						
Married	62.84 (22.85)	2.657	0.050[a]	57.44 (18.58)	0.473	0.637[a]
Divorced	63.55 (20.26)			56.10 (20.34)		
With respect to whether diagnosed with any mental disorder						
Yes	64.23 (19.59)	5.612	0.004[a]	56.07 (19.03)	-1.530	0.122[a]
No	61.56 (23.94)			57.59 (20.80)		

a: Independent sample t-test, SD: Standard Deviation. F:

Hierarchical linear regression analysis was performed to identify the variables associated with ASE. The adult ADHD Scale was included in the first model as the independent variable, and its correlation with ASE was tested. The test revealed that the Adult ADHD Scale (β=-0.37, p=.001) explained 46% of the total variance in the ASE scale (F =47.038; p<0.05; Adjusted R^2=0.46). The mean score of Attention Deficit (AD), the sub-dimension of the Adult ADHD Scale, was included in the second model as an independent variable. In that model, Attention Deficit (β=-0.30, p=.001) similarly explained 43% of the total variance in the ASE scale (F=37.99; p<0.05; Adjusted R^2=0.43). As seen in the third regression model, Hyperactivity/Impulsivity, another sub-dimension of the Adult ADHD Scale, was selected as the independent variable, and the Hyperactivity/Impulsivity (β =-0.31, p=.001) explained 44% of the total variance in the ASE scale (F=38.35; p<0.05; Adjusted R^2=0.44). In the fourth regression model, the Problem, again another sub-dimension of the Adult ADHD Scale, was designated as the independent variable. In that model, the Problem sub-scale (β=-0.36, p=.001) explained 45% of the total variance in the ASE scale (F=46.28; p<0.05; Adjusted R^2=0.45) (Table 5).

Table 5. Hierarchical regression analysis results of factors correlated with ASE (n=1704)

		Variables	ß	t	p	F	Model (p)	Adjusted R^2
ASE	Model 1	Adult ADHD Scale	-0.37	-6.84	0.001	47.038	0.001	0.46
	Model 2	Attention Deficit	-0.30	-6.16	0.001	37.990	0.001	0.43
	Model 3	Hyperactivity	-0.31	-6.18	0.001	38.350	0.001	0.44
	Model 4	Problem	-0.36	-6.80	0.001	46.280	0.001	0.45

4. Discussion

During the study, the Adult ADHD Scale and ASE Scale levels of university students were analyzed with respect to age, gender, faculty/program attending, parental relationship status (if married or divorced), whether they or any family members were ever diagnosed with any mental illness, and self-evaluation of their earlier school achievement. The results implied that the university students, aged between 17 and 20, attending vocational schools of higher education programs, having poor school success, being diagnosed with a mental disorder, and those with parents divorced, had higher Adult ADHD Scale Scores (p<0.05) (Table 4). The study revealed that the overall mean score on the Adult ADHD Scale decreased in the entire group over age. Through a study in our country, which discussed the distribution of Adult ADHD Scale symptoms regarding faculty, gender, and age groups, it was evinced that there was a significant difference regarding age groups for the Attention Deficit (AD) dimension. As for the mean values, the Attention Deficit (AD) subscale scores of the students aged 23 and above turned out to be significantly lower among the students in the age groups of 17-19 and 20-22 (13).

Likewise, the present study's results highlight a significant negative correlation between age and the total score on the Adult ADHD Scale. Our results complies with the literature studies indicating that hyperactivity decreases with age (14-17). Furthermore, our study revealed a significant relationship between the program/faculty attended and the overall mean score on the Adult ADHD Scale. In particular, the Adult ADHD Scale overall mean scores of the students attending vocational school of higher

education programs turned out to be significantly higher than those studying in other programs. It is considered that this situation may arise from the fact that the students attending vocational school of higher education programs are relatively younger than those attending the faculties since the vocational school of higher education departments deliver associate degree programs. The vocational school of higher education students' placement in less selective programs, admitting students with lower points, which means they bring along their problematic self-efficacy from the beginning, might be another reason for the relatively higher Adult ADHD Scale scores. The higher Adult ADHD Scale scores of the vocational school of higher education students, discussed in our research, match up with the literature knowledge putting across sociodemographic results regarding the adverse effects of ADHD symptoms on academic achievement (8,18-20).

In our research, a statistically significant, moderate negative correlation between the Adult ADHD and ASE scales was identified as well as the statistically significant, moderate negative correlation between the Adult ADHD Scale subscales and ASE (p<0.01) (Table 3). In parallel with our study results, the ADHD symptoms and ASE were found to be negatively and closely correlated in other relevant studies (8,21,22).

Studies analyzing ADHD symptoms in terms of gender noted those symptoms were more common in males during childhood, but that difference died out in adulthood (13,23). In our study, there was no gender difference observed in terms of the Adult ADHD scale scores, and that result conforms to the literature (13,23). Although ADHD scale scores do not differ with respect to gender in our study, it is considered that this result may be associated with the equalization of ADHD, particularly in adulthood (13,23,24).

In our study, the answers to the question "Do you have any mental illness?" made up a significantly high score ($p<0.05$) (Table 4). Dvorsky et al. 2018, conforming to our results, put forth the high rate of university students diagnosed with any psychiatric problem causing ADHD and/or learning disorder. The same study stated that university students with ADHD symptoms and mental disorders were at higher risk of failing to get their bachelor's degree, thus, had lower academic efficacy and poorer school success, causing them to get socially stigmatized. In our present study, students with any psychiatric diagnosis had a higher mean score on the Adult ADHD Scale and a lower mean score of ASE, supporting the literature (19,20). Likewise, the results of the studies in the literature draw attention to the co-existence of ADHD and psychiatric diagnosis in young people (25-27). Similar studies ascertained that adolescents and adults with ADHD had significantly more accompanying psychopathology, adjustment functions, and a significant decrease in academic self-efficacy, adolescents with ADHD suffered anxiety disorders, and adults experienced both anxiety and mood disorders (25,26,28). According to Fayyad et al., ADHD was felt 4 times more intensively in those with a distinct mood disorder, and ADHD was statistically significant, different, and higher for the ones with anxiety disorders and drug addiction, while the ASE score was lower (29).

The present study verified that young people with ADHD, who are the children of divorced parents, had a higher mean score on the Adult ADHD scale and a low mean score on the ASE scale. Those results match up with those of Perez and Şenol. Several studies enunciated that psychosocial characteristics such as broken family structure, grave problems between parents, a history of mental disorders in parents, and being the only or first kid of the family were more prevalent among ADHD cases than in healthy controls. For example, some studies report that children living in orphanages have short attention spans and are hyperactive due to long-term emotional deprivation (30,31). It is noted that the healthiest environment where children and young people can live in, from birth, is the family side, and the family is primarily responsible for the young individual's development, growth, self-expression, getting knowledge, and undertaking various roles and responsibilities in the society (32). Another reason for the high mean values of ADHD [64.23 (19.59)] in university students, whose parents divorced at the time of their childhood, is possible the ADHD symptoms that remained unnoticed during childhood (18). When the child has any health problem, parental responsibility increases more than ever. Especially when working on families parenting a young person with ADHD symptoms, the family's approach to the young individual reveals to what degree the factors, such as recognition of the disease, are critical for treatment. For a young person with ADHD, who grew up in a broken family, the deprivation of effective treatment and therapy, confrontation with various psychosocial stressors, and the need for love, support, and attention of the parents are likely to lead to the aggravated ADHD symptoms, and consequently to a lack of academic self-efficacy, especially when they combine with other stress factors in the university life.

Table 5, depicting the outcomes of hierarchical regression analysis, suggests that all sub-dimensions of Adult ADHD and itself are good predictors of ASE (43-46%). Furthermore, this result indicates that the ASE will also considerably improve as Adult ADHD improves. The fact that almost half of the low level in ASE is due to Adult ADHD influence (Table 5) is consistent with the statistically significant, moderate negative correlation between Adult ADHD (together with its sub-dimensions) and ASE (Table 3). The predicting power of Adult ADHD on the ASE within the present literature appears to be compatible with our results (8,18-20).

Our study offers an inventory of the Adult ADHD Scale and ASE symptoms for university students in Turkey, based on relevant data such as faculty/program attended, gender, age, marital status of parents, and any mental disorder diagnosed. It is of considerable value as it contributes to diversifying the limited number of relevant studies.

4.1. Limitations

Although it was of great importance that the number of participants in our study represented Turkey (including 3 different universities in the Eastern, Southeastern, and Central Anatolia Regions of Turkey), failing to confirm the exact time of noticing the symptoms first was a significant limitation. On the other hand, how other mental disorders affect ADHD, and thus, the ASE was minimally discussed. Nevertheless, one can assess that the present study contributes much to the relevant conditions that university students in Turkey encounter. Since the answers given to the scales sent to the WhatsApp groups were used in the study, it is thought that they

may have answered the questions about a small part of the responding population without fully understanding. Although this does not remove the sample size from the reliable range, it is seen as a limitation.

5. Conclusions

The results of this study evinced a statistically significant correlation between the overall scores of Adult ADHD and ASE scales, along with their sub-scores in a moderately negative direction. Additionally, it is noteworthy that the mean values obtained from the Adult ADHD scale are considerably high, and there is a significant/negative correlation between Adult ADHD subscales and ASE. It is another important result that the score on the Adult ADHD scale turned out to be high in divorced parents' children who at present are university students, while the ASE scale's score was low within the population. The regression data analysis confirmed that the Adult ADHD scale and all its sub-scales were good predictors of the ASE scale. It is assessed that ASE-related problems of university students will have been sorted out to a large extent in case the ADHD-related problems are solved. Enhancement of the ASE requires an appropriate balance among all the factors affecting it. Therefore, families, teachers, psychiatrists, psychiatric nurses, and psychologists should be mindful of some relevant strategies to help young individuals with ADHD acquire a higher level of ASE. First, when addressing emotional and physiological arousal, young individuals with ADHD may fail to complete the task when they are afraid or anxious. So, using more flexible and tolerant techniques might be helpful to relieve anxiety about exams or tests. As a second approach, verbal convincing is essential since young students may need to be emotionally assisted and encouraged to realize that they can achieve something. It is very relevant to dwell on indirect experiences as a third method. Seeing the achievements of those with the same disease is likely to encourage young people to follow in their footsteps. Accordingly, organizing group therapies can be effective for enhancing academic self-efficacy. The fourth and most critical strategy is direct experience. Therefore, it may be beneficial to boost students' interest in demanding responsibilities suited to their capacity, to enable them to recognize and accept their own success, and to encourage them to try new things on their own. The primary purpose of applying all these should be to establish an appropriate balance of self-efficacy through rewards and emotional support to increase the motivation of adolescents by directing their attention. Moreover, if young people's self-efficacy mainly relies on previous experiences of success and failure, it may be helpful to address the environment where those challenges emerge. The classroom space in a university is a tough atmosphere, offering countless occasions for a student to learn, achieve and explore. Adolescents with ADHD encounter schoolwork, social difficulties, physical conformity issues, and many other challenges to overcome within the classroom. For this reason, teachers must provide positive feedback and encourage young people for the tasks. Thus, it will be possible to control the ADHD symptoms and enhance the ASE of the young individual.

Conflict of Interest: The authors declare that there were no potential conflicts of interest with regard to the research, authorship and/or publication of this article.

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Data Availability: The data used to support the results of this study are available from the corresponding author upon request.

Authorship Contribution:

PH: Introduction, materials and methods, ethical permission, data collection, research plan and statistical analysis.

SI: Results, discussion and final reading.

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