ORİJİNAL ARAŞTIRMA ORIGINAL RESEARCH

Analysis of the Relationship Between Adolescents' Stress Related to Academic Expectations and Usage of Nonprescription Products

Adölesanlarda Akademik Beklentilere İlişkin Stres ile Reçetesiz Ürün Kullanımı Arasındaki İlişkinin İncelenmesi

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ABSTRACT Objective: The purpose of this study was to determine the relationship between the stress experienced by adolescents in relation to their academic expectations and the use of nonprescription products. **Material and Methods:** An analytical cross-sectional research design was employed. Simple randomization was utilized to select the participants who included 707 students from science, social science, vocational, and Anatolian high schools. The participants completed the Adolescent Information Form, Academic Expectations Stress Inventory (AESI), and Multidimensional Scale of Perceived Social Support (TNAAP). **Results:** No significant statistical relationship was found in any of the subscales of the TNAAP and AESI (p>0.05). Multivariate logistic regression analysis revealed usage of red/green prescribed medication, nonprescription medication, and medication acquired from friends was high among those participants who were unable to talk about their problems to their families. Considering the relationship between environmental factors and adolescent's nonprescription medication usage; presence of friends using medication, vitamin supplements, and nonprescription medication product use was found to increase the risk of nonprescription medication usage among the participants. Furthermore, usage of nonprescription medication was high among those who attended science and Anatolian high schools. **Conclusion:** Approximately 10% of adolescents was consumed tea/coffee above the daily safe dose. The use of products in the immediate vicinity was increased the risk of vitamin supplement use. Test anxiety was increased the risk of usage of nonprescription medication. School type and grade level were effective for adolescents usage of nonprescription drugs, drugs acquired from friends and take vitamin supplements.

Keywords: Adolescent; social support; nonprescription drugs; academic success; anxiety

ÖZET Amaç: Bu araştırmanın amacı, ergenlerin akademik beklentilerine göre yaşadıkları stres ile reçetesiz ürün kullanımı arasındaki ilişkiyi belirlemektir. **Gereç ve Yöntemler:** Analitik bir kesitsel araştırma tasarımı kullanılmıştır. Fen, sosyal bilimler, meslek liseleri ve anadolu liselerinden 707 öğrenci yer almış ve katılımcıları belirlemede basit randomizasyon kullanılmıştır. Katılımcılar; Ergen Bilgi Formu, Akademik Beklentiler Stres Envanteri [Academic Expectations Stress Inventory (AESI)] ve Çok Boyutlu Algılanan Sosyal Destek Ölçeği'ni (TNAAP) doldurmuştur. **Bulgular:** TNAAP ve AESI alt ölçeklerinin hiçbirinde istatistiksel olarak anlamlı bir ilişki bulunmamıştır (p>0,05). Çok değişkenli lojistik regresyon analizi, sorunları hakkında aileleriyle konuşamayan katılımcılar arasında kırmızı/yeşil reçeteli ilaç, reçetesiz ilaç ve arkadaşlarından alınan ilaç kullanımının yüksek olduğunu ortaya koymuştur. Çevresel faktörler ile gençlerin ilaç kullanımlarının ilişkisine bakıldığında, ilaç kullanan arkadaş varlığının reçetesiz ilaç kullanımı, vitamin takviyesi kullanımı ve ilaç dışı ürün kullanımı riskini artırdığı tespit edilmiştir. Yakın çevresinde ürün kullanımının gençlerde vitamin takviyesi kullanımı riskini artırdığı bulunmuştur. Ayrıca fen ve anadolu liselerine devam edenlerde reçetesiz ilaç kullanımının yüksek olduğu saptanmıştır. **Sonuç:** Ergenlerin yaklaşık %10'u günlük güvenli dozun üzerinde çay/kahve tüketmektedir. Yakın çevrede kullanılıyor olması vitamin takviyesi kullanma riskini, sınav kaygısının ise reçetesiz ilaç kullanma riskini artırdığı bulunmuştur. Okul türü ve sınıf düzeyi ergenlerin reçetesiz ilaç kullanımlarını, arkadaşlarından ilaç almalarını ve vitamin takviyesi kullanımlarını etkilemektedir.

Anahtar Kelimeler: Ergen; sosyal destek; reçetesiz ilaçlar; akademik başarı; kaygı

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During adolescence developmental tasks, relationships with family and peers, academic problems, health problems and negative situations related to sexuality, belief system, perceptual characteristics, personality structure are the factors that trigger stress.[1-3] In Turkey, university placements, which are crucial for the job decisions adolescents make and their future lives, are conducted through nationwide centralized examinations. In the 2019-2020 academic year, 2,424,718 high school students wrote the Higher Education Institutions Entrance Exam.[4] The difference between the number of those who wrote the exam and places available, popularity of various majors because of monetary reasons and future opportunities, parents and teachers' strong influence when advising students, and peer interaction are a fundamental source of stress and anxiety for adolescents who are still finding themselves. Furthermore, parents' behaviors, including arranging private lessons and/or sending their children to expensive private schools, result in them developing high expectations and may cause them to suffer financial difficulties. This may exacerbate their children's stress.

During adolescence, individuals start to gain independence and self-control in relation to their socio-emotional development while developing physical, vocational, religious, political, and personal identities.[5] Parents' high expectations with regard to vocational development may result in peer competitiveness. Furthermore, the latter and an excessive academic workload may result in high levels of stress. It is noteworthy that adolescents' academic performances at high school play a fundamental role in their applications to higher education institutions and their careers. The academic stress that adolescents experience during this period affects their success and may contribute to psychological problems such as depression, low level of self-respect, nervous breakdowns, and suicidal ideation.[6-8]

Subsequently, adolescents may start looking for illegal ways to enhance their academic performance such as using substances to help them focus for a lengthy period while studying. These substances include beverages with high caffeine, pharmacological products, vitamin supplements, and herbal teas. Research has revealed that students drink coffee, which has high levels of caffeine, to stay awake and be more active.[9] Although coffee stimulates the central neural system, it may also cause anxiety, poor concentration, exhaustion, addiction, chronic headaches, high blood pressure, depressive psychological mood, and palpitations when large doses are consumed frequently. Coffee also leads to interrupted sleep patterns and may cause children and adolescents to experience memory and learning problems. Furthermore, when used with sugar and cigarettes, it may lead to ill-health.[10] Students also state that such food supplements and medicines increase study and productivity and reduce fatigue.[11] Many families approve and/or encourage their children to use these products. For this reason, in this study, it was aimed to determine the relationship between the stress experienced by adolescents according to their academic expectations and the use of nonprescription medication products.

MATERIAL AND METHODS

An analytical cross-sectional research design was employed. The sample included state high schools. To ensure that each type of high school with different levels of success formed part of the sample, they were classified into four groups: science, social science, Anatolian, and vocational high schools. By employing the website *randomizer.org,* simple randomization was used to select one school from each group. The participants included 707 students from grades 10, 11, and 12. Because ninth graders were in the adaptation stage, they were not included. Every student who was willing to participate was included in the study, which was conducted in 2018-2019.

The participants' socio-demographic information is displayed in Table 1. It can be noted that 59% were female, the majority attended Anatolian and Anatolian vocational high schools, and the grade average was 57.9%. Almost half of the participants (49.2%) did not think the health services were adequate and most (61.4%) chose to go to public hospitals.

The following measures were employed to collect data: Adolescent Information Form, Academic

TABLE 1: The distribution of the participants' socio-demographic information (n=707).		
Features	n	%
Gender		
Female	417	59.0
Male	290	41.0
School type		
Science	113	16.0
Social studies	132	18.6
Anatolian	231	32.7
Anatolian vocational	231	32.7
Grade level		
10th grade	278	39.3
11th grade	238	33.7
12th grade	191	27.0
Grade point average		
0-50	3	0.4
51-60	17	2.4
61-70	61	8.6
71-80	74	10.5
81-90	143	20.2
91-100	409	57.9
Whether health services are sufficient		
Yes	197	27.9
No	348	49.2
Undecided	162	22.9
Health institution		
Family health center	216	30.6
Public hospital	434	61.4
Private hospital	44	6.2
Other	13	1.8

Expectations Stress Inventory (AESI), and Multidimensional Scale of Perceived Social Support (TNAAP).

The **Adolescent Information Form** was employed to collect socio-demographic information such as gender, age, grade levels, ability to access to health services, and the nonprescription substances the participants used.

The **AESI**, which was prepared by Ang and Hugan for Asian secondary and high school students, is a 5-point Likert-type scale, ranging from 1 (never) to 5 (always). The nine-item scale comprises two factors: family/teacher expectations (5 items) and self-expectations (4 items). The higher the scores, the higher the perceived academic stress. Cronbach alpha's coefficient varies between 0.74 and 0.90 for the total scale and its factors.[12]

The **TNAAP** was developed in the United States by Zimet et al. The validity and reliability of the scale for a Turkish population was conducted by Eker et al.[13] TNAAP is a 12-item scale that evaluates the adequacy of social support received from three different sources, namely, family, friends, and private individuals on a 7-point scale, ranging from 1 (very strongly disagree) to 7 (very strongly agree). Cronbach's alpha coefficient of TNAAP is 0.89. The higher the score, the higher the perceived social support.

Ethics approval was obtained from the Ethics Committee of the Faculty of Health Sciences of Aydın Adnan Menderes University (29.08.2018, 2017/45). Informed consent forms were obtained from all participants. The study was conducted in accordance with the principles of the Declaration of Helsinki.

RESULTS

The results revealed that while 13.6% of the participants suffered chronic health conditions, 12% were on medication. Of those who were on medication, 3.7% and 26.1% took red/green prescribed and non-prescription medication, respectively. Furthermore, 33.4% obtained medication from friends, 14.9% used vitamin supplements, and 7.3% took non-medical substances. Moreover, 100% consumed coffee and/or tea daily, with 9.9% having more than five cups a day and 56.8% consuming the beverage mainly in the evenings (Table 2). The results further revealed that 27% of the participants used painkillers as well as vitamins to strengthen their immune system, increase their energy levels, and avoid forgetfulness. The non-medical substances the participants took included fish oil, black seed oil, carob, chestnut honey, kefir, omega-3 supplements, and skin care products.

The participants' scores for the TNAAP and its subscales revealed that the participants' scored 22.23±6.14 for the family support subscale, 21.50±6.29 for the friend support subscale, and 15.62±8.69 for the special human support subscale. Their total score for the scale was 59.34±15.74. Fur-

TABLE 2: Adolescents' state of health and use of medication.		
Features	n	%
Existence of a chronic health condition		
Yes	96	13.6
No	611	86.4
Taking any medicine or not		
Yes	85	12.0
No	622	88.0
Purpose of taking the medicine		
Anxiety/depression	11	12.9
Sleep pills	2	2.4
Allergy pills	17	20.2
Painkillers	16	18.8
Other	39	45.9
Usage of red/green prescribed medicine		
Yes	26	3.7
No	681	96.3
Condition of nonprescription medicine usage		
Yes	184	26.1
No	523	73.9
Medicine through a friend		
Yes	236	33.4
No	471	66.6
Medicine usage during the previous year		
Yes	335	47.5
No	372	52.5
Usage of vitamin supplements		
Yes	105	14.9
No	602	85.1
Usage of non-medical substances		
Yes	51	7.3
No	656	93.7
Friend(s) who use a substance		
Yes	171	24.2
No	536	75.8
Usage of coffee/tea		
Yes	583	82.6
No	27	3.8
Sometimes	97	13.6
Daily usage of coffee/tea		
1-2 cups	465	66.1
3-4 cups	169	24.0
5 cups and more	73	9.9
Time of consuming coffee/tea		
Morning	157	22.0
Noon/afternoon	74	10.5
Evening	402	56.8
Night	74	10.5
Purpose of consuming coffee/tea		
Always	66	9.3
With friends	66	9.3
Exam times	57	8.1
To wake up in the morning	494	69.9
Other	24	3.4

thermore, the participants' scores for the AESI and its factors were 13.49±4.89 for family/teacher expectations, 13.97±3.67 for self-expectations, and 27.47±7.29 for the total scale. Cronbach's alpha for the subscales of the TNAAP were 0.86, 0.88 and 0.92 for family support, friend support, and special human support, respectively, and 0.87 for the scale. Cronbach's alpha for family/teachers expectations and self-expectations of the AESI were 0.84 and 0.73, respectively, and 0.83 for the whole scale.

No statistically significant relationship was found in any of the TNAAP subscales and AESI factors (p>0.05).

Multivariate logistic regression analysis showed that the participants' usage of red/green prescribed drugs, (OR=0.30, p=0.045), nonprescription drugs (OR=0.39, p=0.026), and drugs acquired from friends (OR=0.32, p=0.019) was high in those who were unable to talk about their problems with their families. The analysis further revealed that usage of their red/green prescribed drugs (OR=0.17, p=0.016) and nonprescription drugs (OR=2.17, p=0.025) was high among those who did not trust their friends. Furthermore, the use of drugs acquired from friends (OR=0.48, p=0.029) was high among the participants who perceived that their friends were unhelpful. The usage of drugs acquired from friends was also high among those who experienced their family as unhelpful and had no friends with whom they could share their feelings (OR=0.33, p=0.015), (OR=0.20, p=0.001) (Table 3).

Multivariate logistic regression analysis also revealed that usage of red/green prescribed medication (OR=6.51, p=0.039) was high in the participants who believed they had disappointed their teachers when they failed. In addition, usage of nonprescription medication was high in those who felt negative when their teacher failed to meet their expectations (OR=2.19, p=0.025) and even higher in those who suffered test anxiety (OR=3.09, p=0.001). Usage of medication acquired from friends was very high in those who experienced family stress due to low grades (OR=0.31, p=0.029) and those who believed that they did not meet their own standards (OR=3.36, p=0.018) (Table 4).

TABLE 3: Logistic regression analysis of the relationship between social support levels of adolescents and their use of medicines.

Variables	Odds ratio (95% CI)			p value*
	Usage of red/green prescribed drug	Usage of nonprescription drug	Usage of drug handed over by a friend	
TNAAP Article 8 (No)[a]	0.30 (0.09-0.97)[1]	0.39 (0.17-0.89)[2]	0.32 (0.12-0.83)[3]	0.045[1] 0.026[2] 0.019[3]
TNAAP Article 7 (No)[b]	0.17 (0.04-0.72)[4]	2.17 (1.10-4.29)[5]		0.016[4] 0.025[5]
TNAAP Article 6 (No)[c]		0.48 (0.25-0.92)		0.029
TNAAP Article 5 (No)[d]		2.31 (1.06-5.00)		0.033
TNAAP Article 3 (No)[e]			0.33 (0.17-0.81)	0.015
TNAAP Article 9 (No)[f]			0.20 (0.07-0.52)	0.001

*p<0.05; [a]I can talk about my problems with my family; [b]I can trust my friends when things go wrong; [c]My friends really try to help me; [d]There is a person who is out of my family and a friend who really helps me relax; [e]My parents really try to help me; [f]I have friends with whom I can share my joys and sorrows; CI: Confidence interval.

TABLE 4: Logistic regression analysis of the relationship between adolescents' academic expectation stress levels and medication use.

Variables	Odds ratio (95% CI)			p value*
	Usage of red/green prescribed drug	Usage of nonprescription drug	Usage of drug handed over by a friend	
ABSE Article 2 (Sometimes)[a]	6.51 (0.84-50.19)			0.039
ABSE Article 5 (Sometimes)[b]		2.19 (1.01-4.74)		0.025
ABSE Article 9 (Sometimes)[c]		3.09 (1.62-5.92)		0.001
ABSE Article 4 (Often)[d]			0.31 (0.11-0.88)	0.029
ABSE Article 6 (Sometimes)[e]			3.36 (1.23-9.17)	0.018

*p<0.05; [a]When I fail I think I disappoint my teacher; [b]I feel bad when I fail to fulfill my teachers' expectations of me; [c]I get nervous when I cannot do what I want to do in the exam; [d]I feel nervous that my family will be disappointed with my low grades; [e]I feel nervous when I cannot live up to my own standards; CI: Confidence interval.

The presence of friends using drugs (OR=0.56, p=0.003), use of vitamin supplements (OR=0.62, p=0.047), and non-drug product use (OR=0.49, p=0.023) was found to increase the risk of drug use among the participants. Furthermore, the use of products in the immediate vicinity was found to increase the risk of vitamin supplement use (OR=0.36, p=0.006) (Table 5).

An examination of Table 6 reveals that the usage of red/green prescribed drugs, nonprescription drugs, drugs acquired from friends, and vitamin supplements, which were dependent variables, were included in the multinominal logistic regression model as *yes* or *no.* When *no* was employed as the reference category, it was revealed that usage of nonprescription drugs of those in the *yes* category appeared to be high in science high schools (β=1.068; Wald=8.929; p<0.05) and Anatolian high schools (β=0.985; Wald=8.745; p<0.05). Furthermore, those who studied at science high schools (β=0.783; Wald=5.845; p<0.05), social sciences high schools (β=0.872; Wald=8.529; p<0.05) and Anatolian high schools (β=0.704; Wald=5.480; p<0.05) used drugs acquired from their friends. Furthermore, those in grades 10 and 11 at science high schools (β=1.519; Wald=10.753; p<0.05), social sciences high schools (β=0.963; Wald=4.528; p<0.05), and Anatolian high schools (β=1.012; Wald=5.105; p<0.05) took vitamin supplements. When these variables were evaluated by considering the β coefficients and Wald statistics, they were significantly predictive. Thus, the grade levels and school types were effective predictors of usage of nonprescription drugs, drugs acquired from friends, and vitamin supplements.

TABLE 5: Logistic regression analysis of the relation between environmental factors and medicine consumption of adolescents.

| | Odds ratio (95% CI) | | | |
	Usage of nonprescription drug	Usage of vitamin supplies	Usage of non-medical substances	p value*
Existence of a medicine user friend[a]	0.56 (0.38-0.82)[1]	0.62 (0.38-0.99)[2]	0.49 (0.26-0.90)[3]	0.0031
				0.047[2]
				0.023[3]
Existence of a relative using medicine[a]		0.36 (0.17-0.75)		0.006

*p<0.05; [a]Yes; CI: Confidence interval.

TABLE 6: Multinominal logistic regression analysis of the relation between the adolescents' academic information and drug usage.

Yes			β	SD	Wald	p value	Exp (β)
Usage of red/green prescribed drug	Grade	10th grade	-0.635	0.473	1.802	0.179	0.530
		11th grade	-1.061	0.561	3.576	0.059	0.346
		12th grade	.	.	.	.	.
Usage of nonprescription drug	School	Science	1.068	0.357	8.929	0.003	2.909
		Social studies	0.284	0.349	0.659	0.417	1.328
		Anatolian	0.985	0.333	8.745	0.003	2.677
		Anatolian vocational	.	.	.	.	.
Usage of drug acquired from a friend	School	Science	0.783	0.324	5.845	0.016	2.189
		Social studies	0.872	0.298	8.529	0.003	2.391
		Anatolian	0.704	0.301	5.480	0.019	2.021
		Anatolian vocational	.	.	.	.	.
Vitamin supplements	Grade	10th grade	-0.941	0.270	12.253	0.000	0.390
		11th grade	-0.734	0.272	7.276	0.007	0.480
		12th grade	.	.	.	.	.
	School	Science	1.519	0.463	10.753	0.001	4.569
		Social studies	0.963	0.452	4.528	0.033	2.619
		Anatolian	1.012	0.448	5.105	0.024	2.751
		Anatolian vocational	.	.	.	.	.

Reference category: No; SD: Standard deviation.

DISCUSSION

In this study, the relation between adolescents' usage of nonprescription substances and the stress they experience because of academic expectations with regard to social support and the stress of academic expectations was examined.

The results revealed that 26.1% of the participants took nonprescription drugs. Ekim et al. found that 63.2% of adolescents had used nonprescription drugs in the previous year.[14] With the developing pharmacological industry, drugs are more accessible. Furthermore, technological developments have made it much easier to access information. Individuals generally use Internet search engines to make their own diagnoses and look for pharmacological solutions and subsequently use nonprescription drugs before consulting a healthcare professional. The results showed that 33.4% of the participants were using drugs they had acquired from their peers. Koç found 20.4% of adolescents take medication given to them by friends.[15] Adolescents tend to value their peers and care what they think, thus resulting in close cooperation and emotional sharing between them.[16] Consequently, they have no problem in using medication provided by a peer. Sometimes, they may start using the drug regularly.

The results further revealed that 27% of the participants who self-medicated used painkillers. Koç found that 49.1% of adolescents used analgesics for pain.[15] Ekim et al. demonstrated that among undergraduate university students, 45.5%, 14.7%, and 10% used nonprescription medication for headaches, menstruation, and nausea, respectively.[14,16] Due to previous health conditions, most of society tends to ask their relatives and neighbors for medication rather than going to a hospital or clinic.

The results of this study revealed that 82.6% of the participants consumed coffee or tea on a daily basis of which 9.9% had at least five cups of the beverage a day. The European Food Safety Authority recommends two or a maximum of three cups of coffee for healthy adults a day.[11] Low or medium doses of caffeine make individuals feel energetic, to improve attention and memory; however, there is no conclusive evidence of the effect of caffeine on memory and learning pace.[17] Moreover, a high consumption of caffeine results in negative effects such as sleeping problems, anxiety, headache, increase in fatigue, and high blood pressure. Studies on caffeine consumption in children (3-11 years 2%) and adolescents (12-19 years 4%) are extremely limited.[18]

Şenol et al. found that 33.3% of adolescents consumed too much tea and caffeine.[19] Furthermore, Yıldız and Alphan revealed that students' daily consumption of caffeine exceeded a safe dosage.[20]

Adolescents manage their learning processes by determining their own information gaining processes, after they have achieved the ability to "think about thinking".[16] During this period, they start making career and future plans. One of the most important steps in the process is their achievements at the university entrance exam so as to pursue the career of their choice. To achieve their goals, they need to work consistently hard. It is believed that adolescents use stimulants such as coffee and tea to extend their study hours. It has been revealed that education and choice of vocation are the most intense focus of their hopes and fears.[21] One of the most popular activities adolescents indulge in is staying up all night. It is believed adolescents use stimulants to achieve this.

In this study, no statistically significant relationship was found between the TNAAP and the sub-dimensions of the AESI ($p>0.05$). Preece revealed that although there is a negative relation between teachers' support and perceived stress, there is no relation between perceived stress and classmates' support.[22] Similarly, Gençtanırım et al. showed that social support does not predict academic success.[23] During adolescence, individuals start to develop the ability of taking responsibility and making independent decisions. Subsequently, they go through a personalization process in relation to decisions, manners, and behaviors. Adolescents expect social support from their family and peers.[24] In this study, although no relation between academic expectancy stress levels and perceived social support levels were found, regression analysis demonstrated that adolescents who cannot speak to their parents about their problems and who do not trust their peers use red/green prescribed drugs, nonprescription drugs, and drugs acquired by peers more often than their counterparts who do not experience such difficulties. Perceived social support levels increase and risky behaviors tend to decline.[23] Adolescents' decline of social perception may have a negative effect on individuals' thoughts and social abilities, which may lead to depression and subsequently nonprescription drug usage.

Regression analysis also showed that the usage of nonprescription drugs was higher among the adolescents whose parents suffered anxiety because of their low grades. Furthermore, usage of drugs provided by peers was higher among those who thought they were not living up to their expected standards. Parents' negative attitude is a risk factor for children's internalizing and externalizing problems.[25] It has been shown that after middle school, parents' expectations have a strong influence on children's academic success.[26] Even though family's attention and expectations have an effect on children's academic success, mental readiness, parents' attitude when raising children, and socializing also have an effect thereof.[27]

In our study, it was determined that the use of nonprescription medication by the 10th and 11th grade students and the students who attend to science high

schools and Anatolian high schools is high. In these types of high schools, students have particularly higher academic success. Therefore, academic expectations of both self, from their families and from their teachers are high. In the study, which investigation of high school students' fears of negative evaluation in the context of cognitive distortions regarding academic, it was stated that the variable that best explains the students' fear of being evaluated negatively in the academic environment was the catastrophizing. Catastrophizing is defined as having bias focusing on the negative worst consequences.[28] In another study, investigating the self-medication use of adolescents, no relationship between self-medication use and the type of school students attend to and/or grade level that student is in was found. However, it was stated that the adolescents who evaluated their school success as moderate and bad used self-medication more.[29] In a national study conducted in the USA, it was stated that 7% of senior high school students used prescription stimulant drugs to increase the concentration of students, to help their studies and to increase alertness, briefly to increase academic performance. It was added that this situation points to bigger problems related to the item besides academic performance.[30] The increase in neural activity in the brain, which increases the reward drive through dopamine secretion, reaches its highest level in mid-adolescence. This causes adolescents to seek enthusiasm and excitement, be unaware of potential risks, and focus on positive rewards (such as academic success). Towards the age of twenty, a behavior is evaluated not only according to anticipation of reward or benefit before performing, but by using intuition in a wider context.[31]

CONCLUSION

Approximately 10% of adolescents was consumed tea/coffee above the daily safe dose. School type and grade level were effective for adolescents usage of nonprescription drugs, drugs acquired from friends and take vitamin supplements. The use of products in the immediate vicinity was increased the risk of vitamin supplement use. Test anxiety was increased the risk of usage of nonprescription medication. Adolescent' usage of red/green prescribed drugs, nonpre-

scription drugs, and drugs acquired from friends was high in those who were unable to talk about their problems with their families.

Adolescent period is an important period in terms of adapting healthy life habits. Thus, adolescents should be educated about the effects of nonprescription medicine and caffeine consumption on health. Especially if this education process is aimed towards creating a "Healthy Life Plan" which would support individual not only about the effects of these substances but also in terms of physical health (nutrition, sleep, physical activities, controlling unhealthy behaviours etc.), social abilities, emotional health (relaxation, positive thinking etc.), moral and intellectual life; it would allow gaining long term and greater benefits.

One of the important reasons that adolescents use these substances is the anxiety to gain academic success. It can be observed that many high school students leave all the work that required for university entrance exam to their last two years or even to their very last year. These last minute workouts may also add up to already existent anxiety. Thus, it would be beneficial to increase consultant services in schools about career planning and study plan making, beginning with the first year.

Even though peers are more upfront compared to parents for adolescents; adolescents still do not think their peers as a reliable source of information, they still find parents more trustworthy in terms of reliable information. Thus, it is crucial that during adolescent period adolescents and their parents keep up a healthy communication. It would also be beneficial to provide proper education about healthy communication with adolescents for parents.

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