

# Determination of Medicine Addiction Dimension in Young Adults

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**Received date:** April 12, 2023; **Accepted date:** April 21, 2023; **Published date:** April 28, 2023.

**Citation:** Gökhan D. Akarsu, (2023), Determination of Medicine Addiction Dimension in Young Adults, *J. Addiction Research and Adolescent Behaviour*, 6(1) DOI:10.31579/2688-7517/067

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## Abstract:

**Aim:** The aim of this research is to raise awareness about medicine use and frequency of medicine use among young adults in Turkey.

**Material and Methods:** This descriptive and cross-sectional study was conducted in a university state in the Central Anatolia region of Turkey. The data of the study were collected by the researcher by examining the literature and using a data collection form.

**Results:** The mean age of the participants in the study, 20.13±1.82 years, 48.4% have a medium income, 97.2% buy their medicines from pharmacies. In addition, 89.8% of the employees stated that a doctor's approval is required to use drugs. 42.2% of them decide on their own whether they need to use medication, 39.7% of them use medicine every 48 hours, 90.5% of them use the medicine given by the doctor. 6.3% of the participants stated that they used medicine for distraction, 6.7% for anxiety, 9.5% for stimulant and sedative medicine, 8.8% for hormone-derived medicine.

**Conclusion:** In the light of the data obtained from the research, all of the hormones, sedatives, tranquilizers and anxiety-relieving medicine are not used under the control of a doctor, the society should be informed about the harms of such medicine, 1 out of every 2 medicine used is painkillers, the dosage of the medicine prescribed by the doctor should be given orally. It may be useful to inform the patient of the effects of under- or over-dose use and not using it in the recommended time after the medicine is expressed.

**Key Words:** medicine addiction; addiction; young adults addiction; harm to health; medicine

## Introduction

A medicine can be medically described as a chemical molecule given to the sick person by adjusting the dose and time, in order to cure the disease or any condition. The use of medicine has increased due to the discovery of therapeutic properties of new molecules, and there are greater usage rates than ever before in the world. The fact that the use of medicine increases the outpatient treatment options and decreases the bed treatment option ensures that it always maintains its popularity. However, it is expected that the molecules given for treatment will cause some side effects. These side effects are given in detail in the package insert in the medicine box, under the frequency of occurrence and side effects. It has been reported that in case of occurrence of effects not mentioned in the content, it is necessary to go to a pharmacy or a doctor as soon as possible. Medicine use is evaluated on the axis of profit and loss, and is used by physicians by adjusting the dose and duration. Here, the dose adjustment is completely left to the physician and a solution to the disease

can be found with the appropriate dose amount, and the appropriateness of the dose amount is evaluated in the follow-up examination.

Especially in recent years, there has been a growing trend towards individual medicine therapy. However, this is not a treatment method and should not be applied. According to the literature, in recent years, the treatment method using individual medicine varies between 11.2% and 93.7%, depending on the region [1].

Medicines, which are described as OTC, can be taken in consultation with the pharmacist, and for which there is sufficient knowledge about their harm, can be taken easily by people [2].

However, physicians can prescribe OTC type medicine after examination. Some medicine are not OTC type and are only given by physicians. Physicians prescribe these medicine prescribed to their patients to be used within the given dose and time, and the patient's recovery depending on

the medicine. However, recent studies have reported that between 5% and 40% lifetime use of prescription stimulants (NMUPS) among young adults [3-4].

He reported that some patients misrepresented themselves to the physician and produced false symptoms in order to be able to take the medicine they wanted, thus succeeding in taking their medication [5].

Long-term medicine use without a doctor's approval can be considered addiction. Another situation is the non-compliance with the dose and duration given by the patient. For example, some patients are asked to use 14 of the 20 medicine in the medicine box, and to come back for the control by using it in the morning and evening within 7 days. However, the patient uses the tablet 3 times a day or for 10 days, morning and evening, and comes to the control when the box is finished. When it is stated here that the doctor did not follow the instructions given to him, he may try to deceive the doctor by saying that he did not fully recover, that he misunderstood.

In fact, it is a known fact that patient do not pay enough attention to the duration and dose of medicine use. However, due to the growth of the pharmaceutical industry, the use of many different molecules and the differentiation of the harms it can cause, it is an issue that needs more attention than ever before.

## Material and Method

**Type of Study:** This descriptive and cross-sectional study was conducted to increase awareness and compliance with the dose and duration of the medicine prescribed by the doctor among young adults and adults.

**Sample:** The research was conducted at a university campus in Central Anatolia. The research was conducted with young adults aged 18-29 years. All students who accepted to participate in the study without sampling selection were included in the study. The research was completed by reaching 80% of the universe with 1141 students.

**Data Collection Tools:** Data were collected by using a questionnaire prepared in line with the literature as a result of the research conducted by researcher.

**Questionnaire form:** A 24-item questionnaire was used, which included questions to determine students' demographic characteristics (age, gender, class, marital status, etc.) and medicine addiction. Application of Data Collection Tools: Data were collected by the researchers by interviewing young people face-to-face and using a questionnaire.

**Evaluation of Data:** Data were evaluated using numbers, percentages, means and standard deviations on the computer.

**Ethical Dimension of the Study:** xxxxx Ethics Committee approval (Approval No. 39/08) and permission from the institution where the research was conducted were obtained in order to conduct the research.

## Results

The mean age of the participants in the study was  $20.13 \pm 1.82$  years, 77.1% were female, 77.1% had associate degree education, 77.6% lived in medium-sized cities, 77.2% They stated that they had a nuclear type family, 92.2% did not have a job other than being a student, 48.4% had a medium income level, and 97.2% bought their medicines from a pharmacy.

Features		
Averageage (years)	20,13±1,82	
Gender	n	%
Woman	880	77,1
Male	261	22,9
Study		
Highschool	880	77,1
Undergraduate	252	22,1
Graduate	9	0,8
Marital Status		
Married	41	3,6
Single	1100	96,4
Income status		
Income less than expenses	480	42,1
Income equal to expenses	552	48,4
Income higher than expenses	109	9,6
Working status		
Yes	89	7,8
No	1052	92,2
Family Status		
Nuclear family	881	77,2
Extend Family	260	22,8
Living Place		
Village	260	22,8
Town	625	54,8
City	256	22,4

**Table 1:** Distribution of some socio-demographic characteristics of the students.

In our study, participants were asked questions about drug use. The answers given by the participants to these questions are given in Table 2

Categories	n	%
<b>For the using drugs needs to medicine approval by doctor?</b>		
Yes	1025	89,8
No	116	10,2
<b>Do you decide to use medication yourself?</b>		
Yes	481	42,2
No	660	57,8
<b>How often do you usually take medication (Day)?</b>		
Never	316	27,7
Every day	136	11,9
1 in 2 days	317	27,8
1 in 3 days	4	0,4
1 in 5 days	8	0,7
1 in 7 days	16	1,4
1 in 10 days	20	1,8
1 in 14 days	4	0,4
1 in 15 days	184	16,1
1 in 30 days	136	11,9
<b>Do you use the drugs according to the dose and duration given by the doctor?</b>		
Yes	1033	90,5
No	108	9,5
<b>Do you use painkillers instead of going to the doctor when you feel any pain?</b>		
Yes	888	77,8
No	253	22,2

Table 2: Questions about drug use.

The use of stimulant drugs is becoming more and more common nowadays. Participants in the study were asked questions about their use of some stimulant drugs. These questions and the answers given to them are given in table 3.

Categories	n	%
<b>Have you used drugs against distraction?</b>		
Yes	72	6,3
No	1069	93,7
<b>Have you used hormone derivatives and/or drugs that stimulate hormone production?</b>		
Yes	100	8,8
No	1041	91,2
<b>Have you used medication to help relieve your anxiety?</b>		
Yes	76	6,7
No	1065	93,3
<b>Have you used stimulant (red prescription) and sedative (green prescription) drugs?</b>		
Yes	108	9,5
No	1033	90,5
<b>Have you used substances used to build muscle?</b>		
Yes	80	7,0
No	1061	93,0
<b>How long did you use substances used to build muscle?</b>		
Never	1049	91,9
1 month	28	2,5
2 months	12	1,1
3 months	28	2,5
4 months	12	1,1
6 months	4	0,4
8 months	4	0,4
24 months	4	0,4
<b>Do you know the ingredients of bodybuilding substances?</b>		
Yes	76	6,7
No	1065	93,3
<b>Do you know the side effects of bodybuilding substances?</b>		
Yes	124	10,9
No	1017	89,1
<b>Do you know the harm that bodybuilding substances can do to the body?</b>		

Yes	172	15,1
No	969	84,9
<b>Do you know that bodybuilding substances can cause death?</b>		
Yes	236	20,7
No	905	79,3

**Table 3:** Information on using stimulant drug.

The use of drugs that should only be given under the supervision of a doctor with the approval of a doctor is given in Table 4.

Categories	n	%
<b>Have you received a doctor's approval while using hormone medication?</b>		
Yes	84	7,4
No	1057	92,6
<b>Have you received a doctor's approval while using anxiety medication?</b>		
Yes	71	6,2
No	1049	93,7
<b>Have you received a doctor's approval while using (red prescription) and sedative (green prescription) drug?</b>		
Yes	92	8,1
No	1049	91,9

**Table 4:** Information about the drugs that should be given under the supervision of a doctor.

Information on the date of the last doctor's appointment and the medication prescribed for the patient to use after this appointment are given in Table 5.

Categories	n	%
<b>When was the last time you went to the doctor?</b>		
I have never been in the last 1 year	857	75,1
Yesterday	16	1,4
2 days ago	12	1,1
3 days ago	12	1,1
7 days ago	32	2,8
10 days ago	12	1,1
14 days ago	20	1,8
15 days ago	8	0,7
21 days ago	4	0,4
28 days ago	4	0,4
30 days ago	60	5,3
40 days ago	4	0,4
60 days ago	28	2,5
90 days ago	4	0,4
120 days ago	8	0,7
150 days ago	8	0,7
180 days ago and below	52	4,7
<b>What medicine did you take the last time you went to the doctor?</b>		
I did not take any medician	837	73,4
Painkiller	156	13,7
Cold medicine	92	8,1
Eye medicine	4	0,4
Toothache medicine	4	0,4
Vitamin medicine	8	0,7
Stomach medicine	16	1,4
Menstrual medication	8	0,7
Blood pressure medicine	4	0,4
Heart medicine	8	0,7
Skin cream	4	0,4

**Table 5:** Information about the last doctor appointment date and the medication given.

## Discussion

The use of medicine is one of the most effective methods used for the treatment of diseases in the 21st century. Most of the medicines in Turkey are bought from pharmacies. However, some OTC-derived medicine, vitamins, protein-based products can be sold on websites, herbalists and even in gyms. The requirement for all these products to be approved by the Ministry of Health is not included in the official procedure. But full control by other institutions is not possible. In particular, the products purchased from foreign companies pass through the customs, while the substances brought illegally are used completely uncontrolled. However, our aim in this research, unlike all these, is to determine the consumer tendency regarding the use of medicine and the supply of medicine, and to provide resources for the literature in order to control the situations, especially among the youth, by working on them by the governments.

The mean age of the participants participating in our study was  $20.13 \pm 1.82$  years. Since this age average is more fortunate than previous generations in accessing information through the internet, which they actively use throughout their lives, it is important in terms of determining their exposure to their environment. 77.1% of the participants in the study are women. All participants who agreed to participate in the study between the specified dates without sampling were included in the study. Therefore, the proportion of female participants was higher.

When the educational status is examined from the demographic data, 77.1% of them are educated at the college level. 96.4% are single and 48.4% have the same income and expenditure, 92.2% are unemployed, 77.2% have a nuclear family, 77.2% are urban and large lives in the city. 89.8% of the participants in the study stated that a doctor's approval is required to use medication. On the other hand, it has been stated that almost one out of every 10 people does not see a doctor's approval necessary to use medicine. Some OTC-derived vitamins can be taken with the advice of a pharmacist without the approval of a doctor, and some can be taken by consumers without the need for advice. The medicine used here is used through the information obtained from the environment, reading the prospectus or information obtained from the internet. It is a dangerous practice to use medicine without doctor control, that is, without patient evaluation. Because it is necessary to diagnose the disease, to report the side effects of the medicine that is planned to be used, to plan the dose to be used accordingly, and to be called for control again when necessary. However, none of these evaluations are made in medicine-focused approaches. Although the possible effects are reported in the package insert of the medicine, even the simplest OTC class medicine have much more effects. Tolerability of these effects may sometimes require further investigation. For this reason, the fact that one out of every 10 people does not need a doctor's approval in the use of medicine is considered as a big problem. 42.2% of the participants in the study reported that they decided whether they needed medication or not to himself. It can be said that this result shows us that there is an awareness that the treatment will not be applied by almost one of every two people, even in diseases that can be cured by applying a series of simple methods such as resting, airing the environment frequently, using herbal teas before going to the doctor. For this reason, the density, especially in health institutions, will never decrease. 39.7% of the participants in the study reported that they used medicine every 48 hours. 90.5% of the participants in the study reported that they used the medicine prescribed by the doctor and that the dose period given by the doctor was applied. On the other hand, it was determined that one out of every 10 people did not comply with the amount and duration of the dose given by the doctor. This has shown us that education should be given to raise awareness about the amount and duration of the dose in the society. Rickles (2010), in his study, included the importance of medicine compliance and the difficulties in medicine compliance, and included the importance of considering this situation by clinicians and also informing them [6].

22.2% of the participants in the study reported that they use painkillers instead of going to the doctor when they have any pain. Some of the pain relievers are in the OTC classification. It is used with the approval of the pharmacist without requiring the approval of the doctor. The problem here is the fact that the possibility that some diseases can be masked by using painkillers can be ignored. Bicket et al. (2022), Kiluk et al (2022) and Kissin (2022) discuss painkiller addiction, Christie (2008), painkiller use, painkiller dependence and tolerance that can be shown when the use is stopped, Chavkin (2011) and Barry et al. (2010) gave extensive information about the problems of painkiller addiction in primary care. In fact, opioid addiction is still one of the major problems among all people. It is closely related to all states and societies (7-12). Distraction is becoming more and more common, especially among young people. Distraction, focusing problems due to developing technologies, increasing unemployment, exams and qualification commissions stress people and their concentration of thoughts makes it difficult to concentrate on a single point. In our study, 6.3% of the participants stated that they used medicine for focus, 6.7% for anxiety relief, 9.5% for stimulant and sedative medicine, and 8.8% for hormone-derived medicine. Hormone-derived medicine are used for reasons such as growth and development, development of sex hormones, treatment of polycystic ovary, increased libido, treatment of deficient hormone levels. Hormones are special biological molecules used to stimulate tissues or organs. Considering that hormone is produced and used in  $\mu\text{g}$ ,  $\mu\text{l}$  and  $\mu\text{mol}$  ratios, the magnitude of the damage caused by a small amount of uptake error is revealed. While some of the hormone-derived medicine are under the control of a doctor, some are used by consumers through internet shopping or illegally obtained without the approval of the Ministry of Health. Yasui et al. (2022) reported in their study that the prevalence of oral contraceptive hormone use was 6%, and those who received hormone replacement therapy were 13.8% [13].

7% of the participants in the study stated that they use the substances called protein powder, which is called body building substance. Of those who use protein powder, 95.7% know the content of these substances, 10.9% know the side effects of bodybuilding substances, 15.1% know the harmful effects of bodybuilding substances, 20.7% know that they can endanger life. expressed. Akarsu (2021) and Cawood et al. (2012), uncontrolled use harms many tissues, especially liver and kidneys (14-15). More than 15% of those who use hormone-derived medicine, 7.5% of those who use medicine for anxiety, and 7.7% of those who use addictive medicine stated that they use these medicine independently of the doctor. It is a huge problem that medicine that are so powerful and that can be reached in a limited way due to their side effects are available. In addition, social education on this issue should be started first. Considering that 1141 people participated in the study, when the frequency of visiting the pharmacy for each day in 30 days is evaluated, (30 days \* frequency) approximately 97 people went to the pharmacy, this rate corresponds to 8.5% of the participants, which is 8% in 30 days, It was calculated that 5 of them went to the pharmacy at least once. In addition, it was observed that the most common reason for going to the pharmacy was to buy painkillers with 13%.

## Conclusion

Medication is one of the easiest, fastest and cheapest solutions for diseases. Of course, it is possible with the appropriate medicine given by the doctor who is a competent person. In the light of the data obtained from the study, it was seen that not all of the hormones, sedatives, tranquilizers and anxiety-relieving medicine were used under the control of a doctor. In Turkey, such medicines are not given from pharmacies without a doctor's prescription. The conclusion drawn from this can be evaluated that such medicine are procured illegally or secretly. However, since this is a problem in all countries, it is considered that informing the public and informing them about the harms of such medicine will be the

most effective method since it will reduce the demand. In addition, the fact that painkillers are consumed so much and that 1 of every 2 medicine used almost independently of the doctor is painkiller, has revealed another problem. In addition, after verbally expressing the dosage of the medicine prescribed by the doctor, informing the patient about the effects of using incomplete or excessive doses and not using them within the recommended time may be helpful in preventing medicine incompatibility.

### Acknowledgments

Thanks to all the participants in the research for the unique information he provided.

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