

Sexual Activity Trends of Turkish Adolescents

Türk Ergenlerinin Cinsel Aktivite Eğilimleri

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ABSTRACT Objective: To evaluate the sexual activity behaviors of Turkish adolescents at the transition period from high school to university, a prospective study was conducted inquiring the sexual activity patterns of adolescents applying to different programs of Trakya University in Edirne, Turkey. **Material and Methods:** All applicants were invited between 2001-2004. There were 16203 participants (3445, 3559, 5402, and 3797, respectively in the years studied) included. Data were analyzed using the Chi Square test. **Results:** 27.8% of the participants had at least one sexual intercourse (49.2% of the boys and 3.2% of the girls). Sexual activity rate gradually increased between 2001 and 2003, and declined to the 2001 values in 2004 (26.3%, 27.9%, 29.7% and 26.2% respectively). This difference was statistically significant (χ^2 : 17.653, $p < 0.01$). **Conclusion:** Beginning sexual activity at early adolescence increases the importance some problems including unwanted pregnancies and sexually transmitted diseases. The fact that sexual activity among male adolescents is approximately 15 times more than their girl peers can be attributed to the approach of Turkish culture to sexuality and gender. While augmenting sexual education programs in undergraduate education, this gender difference and cultural factors should be further evaluated in order to reveal possible protective variables for adolescents.

Key Words: Adolescent; coitus; interpersonal relations; Turkey

ÖZET Amaç: Liseyi bitirerek üniversiteye gelen Türk ergenlerinin cinsel aktivite davranışlarını değerlendirmek için Türkiye’de Trakya Üniversitesi’ndeki değişik programlara kayıt yaptıran öğrenciler arasında bir prospektif çalışma yürütüldü. **Gereç ve Yöntemler:** Kayıt için gelenlerin tümü 2001-2004 yılları arasında bir ankete davet edildi. Çalışmaya 16203 kişi katıldı, (yıllara göre sırasıyla 3445, 3559, 5402, ve 3797 kişi). Veri analizi için ki-kare testi kullanıldı. **Bulgular:** Katılımcıların %27.8’i en az bir kez cinsel ilişkide bulunmuştu (erkeklerin %49.2’si, kızların %3.2’si). Cinsel aktivite oranı 2001-2003 yılları arasında giderek artarken 2004 yılında 2001’deki değerlere geri döndü (sırasıyla %26.3, %27.9, %29.7 ve %26.2). Bu fark istatistik olarak anlamlıydı (χ^2 : 17,653, $p < 0.01$). **Sonuç:** Cinsel aktivitenin ergenliğin erken döneminde başlaması istenmeyen gebelikler ve cinsel yolla bulaşan hastalıklar gibi bazı sorunların artmasına neden olabilir. Erkek ergenlerdeki cinsel aktivitenin kızlara kıyasla 15 kat daha fazla olması Türk kültüründe cinselliğe ve cinsiyetlere karşı yaklaşıma atfedilebilir. Üniversite öncesi dönemde cinsel eğitimi güçlendirirken, ergenler için koruyucu olabilecek bazı başka değişkenleri ortaya çıkarabilmek için cinsiyet farkını ve kültürel faktörleri daha fazla değerlendirmek gereklidir.

Anahtar Kelimeler: Ergen; cinsel birleşme; kişilerarası ilişkiler; Türkiye

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Sexuality in Turkey, as in many countries, has been an undercovered issue; education, service and research on this topic are insufficient. In USA, risky health behaviors of adolescents like smoking, alcohol and

substance abuses, and sexual activity are being followed up by using Youth Risk Behavior Survey (YRBS).¹ However there is no follow-up program on risky behaviors of adolescents in Turkey. Almost all of the studies on sexuality in Turkey are cross-sectional studies on AIDS or other sexually transmitted diseases on small sample populations.²⁻⁹ In a study among university students, it was determined that 24.1% of the students (44.5% of male and 3.9% of female) had at least one sexual intercourse and 40.7% of them had intercourse with more than one partner in the last six months.¹⁰ In a previous study, 24% of 20 year old people had intercourse with the other gender. In the study of Akin and Ozvaris¹¹ the rate of sexual intercourse among Hacettepe and Dicle Universities were 7% and 9%, respectively. Although the age of sexual activity decreases and the rate tends to increase among adolescents in Turkey, there are no long term follow-up studies to expose the concrete data of this situation.

This study, unlike other investigations in Turkey, is focused on the rate of sexual intercourse among adolescents, the age at first intercourse and the trend followed in years.

MATERIAL AND METHODS

SETTING

In Turkey, after 11 years of basic education, students are placed to higher education programs which are preferred by students according to the central examination results. In years 2001, 2002, 2003 and 2004, a total of 33547 students (7099, 8906, 8596 and 8946, respectively) have registered in Trakya University from different geographical regions of Turkey.

SAMPLE

All of the students registered in years 2001, 2002, 2003 and 2004 formed our study population. In years 2001, 2002, 2003 and 2004, a total of 33547 students (7099, 8906, 8596 and 8946, respectively) registered in Trakya University. Approximately 26000 people were reached and proposed to be included in the study, 16995 of them accepted to participate (response rate= 50.6%). After stratifying

the sample according to the population density in the seven regions of Turkey, it was assured that all regions were represented with the minimal necessary sample sizes.

POWER ANALYSIS

According to previous studies in our country, the ratio of sexual activity among university-aged youth is 25%.¹¹ In power analysis, the alternative p value was taken as 27.5% calculated from hypothesis of p value as 25%, with a tolerance rate of 10%. The power of this study is calculated as 91.71% in the power analysis based on the lowest participant number (year 2001; n= 3445) of a four-year period.

INCLUSION CRITERIA

A total of 17634 participants matched the following inclusion criteria: 1) to gain the right to register in any department of Trakya University, 2) to agree to participate in the study, 3) to be 25 years of age or younger.

EXCLUSION CRITERIA

Exclusion criteria of 792 questionnaires were: 1- Conflicts in questionnaire information. Questionnaires with conflicting answers were excluded, for example choosing "no" for the question "have you ever had an intercourse", and any answer for the question "who was your first sexual partner". 2- To fill out less than 50% of the questionnaire. 3- Not to fill out all of the questions on demographic data.

DATA COLLECTION

A questionnaire was developed by the researchers to collect data. Questions on demographic features, sexual behavior and some sociocultural factors were asked to newly registered students. The developed questionnaire was tested on a pilot group. Mean time to fill out the questionnaire was 5 minutes.

ETHICAL ISSUES

The approval of Trakya University Medical Faculty Ethical Committee has been taken. The participants were verbally informed and their consents were also taken.

APPLICATION

Questionnaire was applied at the beginning of each education year in 2001, 2002, 2003 and 2004 by the researchers. Participants filled out the forms in a quiet environment. Approximately 26000 students who came to register were reached. 16995 students agreed to participate. Total 16203 data were entered in the computer in years 2001, 2002, 2003 and 2004 (3445, 3559, 5402 and 3797, respectively) for statistical analysis.

STATISTICAL ANALYSIS

Statistical analysis of collected data was performed using S0064 Minitab Release package program (license number: WCP 1331.00197) in Center of Information Technologies of Trakya University, Directorate of Medical Faculty.

Frequency distributions, descriptive statistics and Chi square have been used. Data were expressed as mean values (and minimum and maximum values). Statistical significances 'p' were shown in the relevant tests. H_1 hypothesis were formed bidirectionally and bidirectional 'p' values were shown in the analysis ($p < 0.05$ means statistically significant and $p > 0.05$ means not significant).

DEPENDANT VARIABLES

Dependant variables of the study were: 1- Having the experience of sexual intercourse, 2- The age of first sexual intercourse, 3- Number of sexual partners.

INDEPENDENT VARIABLES

Independent variables of the study were: 1- Age, 2- Gender, 3- The year of the research.

The compatibility of the variables age and age of first intercourse to the normal distribution have been investigated with Kolmogorov Smirnov test, which revealed that the data were not normally distributed (Kolmogorov Smirnov Z and p were respectively 13.502, < 0.001 ; 4.483, < 0.001).

RESULTS

The mean age of the participants was 18 years (minimum 16, maximum 25). There were 7630 females (47.1%) and 8570 males (52.9%).

The rates of sexual intercourse were 26.3%, 27.9%, 29.7% and 26.2% for the years 2001, 2002, 2003 and 2004, respectively. There was a significant difference between years in terms of sexual intercourse history (χ^2 : 17.653, $p=0.001$, Table 1).

As the distribution of sexual intercourse history based on gender was investigated according to years, the rates of male participants who had sexual experience in years 2001, 2002, 2003 and 2004 were 48.9%, 49.3%, 51.1% and 46.5%, respectively. This difference in years was statistically significant (χ^2 : 9.447, $p=0.024$, Table 1).

The rates of female participants in years 2001, 2002, 2003 and 2004 who had sexual experience were 4.3%, 2.2%, 3.1% and 3%, respectively. This difference in years was statistically significant (χ^2 : 11.624, $p= 0.009$, Table 1). The sexual intercourse rate of male participants was almost 15-fold more than females.

The participants were categorized according to their ages, as; ≤ 17 , 18, 19, 20 and ≥ 21 years of age. Based on these categories, it has been found that 20.6%, 24.5%, 28.7%, 36.5% and 40.9% of them had sexual intercourse, respectively. We found that the rate of sexual intercourse increased with age and there was a statistically significant difference in this comparison (χ^2 : 270.431, $p < 0.001$, Table 2). The percentage of the girls who declared that they had their first sexual intercourse at or after 21 years of age was 21.8%, while it was 10.9% of the boys. The rate of having sexual intercourse was found higher in transition from 19 to 20 years of age.

Among participants who had a sexual experience, 78.7% of them had their first sexual experience at or before the age of 17 while 16.3% had it

TABLE 1: The sexual intercourse rate for each gender through years 2001-2004

	Total	Female	Male
2004	924 (26.2%)	52 (3.0%)	872 (46.5%)
2003	1492 (29.7%)	74 (3.1%)	1418 (51.1%)
2002	989 (27.9%)	36 (2.2%)	953 (49.3%)
2001	905 (26.3%)	74 (4.3%)	831 (48.9%)
χ^2, p	17.653, 0.001	11.624, 0.009	9.447, 0.024

Age	Total	Female	Male
≤ 17 yrs	682 (20.6%)	25 (11.6%)	624 (16.6%)
18 yrs	1368 (24.5%)	63 (29.2%)	1279 (34.0%)
19 yrs	1021(28.7%)	51 (23.6%)	948 (25.2%)
20 yrs	540 (36.5%)	30 (13.9%)	502 (13.3%)
≥ 21 yrs	465 (40.9%)	47 (21.8%)	410 (10.9%)
χ^2, p	270.431, <0.001	87.876, <0.001	239.479, <0.001

at 18 years of age, 3.4% at 19, 1.1% at 20 and 0.5% at or after 21 years of age. It has been determined that approximately 4/5 of the participants had their first intercourse at 17 years of age or younger. There was no statistically significant difference in first sexual experience age according to years (χ^2 :11.291, $p= 0.186$, Table 3).

It was determined that the age of first sexual intercourse was higher in girls compared to boys. Eighty percent of the boys and almost half of the girls stated that they had their first sexual experience at 17 years of age or younger. This difference between genders was similar for each year. This difference is found to be statistically significant (χ^2 : 25.620, $p< 0.001$, Table 3).

While first sexual intercourse age had a statistically significant difference according to gender

(χ^2 : 25.620, $p< 0.001$), there was no difference according to years (χ^2 : 11.291, $p< 0.186$).

The number of sexual partners of sexually active participants has been noticed to be increased in years. The rates of having four or more sexual partners in years 2001, 2002, 2003 and 2004 have been found 14.6%, 18.3%, 31.7%, 30.8%, respectively. This increase was statistically significant (χ^2 : 65.286, $p< 0.001$, Table 4). The rate of having multiple sexual partners was increasing for both boys and girls. Nevertheless, it has been shown that boys had 2.5 times more multiple partners compared to girls. This difference was statistically not significant for the years 2001 and 2002, while it was significant for the years 2003 and 2004 (Table 4).

The rate of having multiple sexual partners has been shown to increase significantly among 17 year olds or younger in years. One point four percent, 9.9%, 14.2% and 16.3% of the participants with sexual experience have been found to have four or more sexual partners in their lifetime in the years 2001, 2002, 2003 and 2004, respectively (Table 5). According to age groups, there were no statistically significant differences between those who had four or more sexual partners in years 2001, 2002 and 2004, while it was statistically significant in 2003 (Table 5).

Year		≤ 17 years	18 years	19 years	20 years	≥ 21 years
2001	Male	692 (79.1%)	148 (17%)	25 (2.8%)	6 (0.7%)	3 (0.4%)
	Female	16 (49.8%)	11 (30.7%)	4 (13.1%)	1 (3.1%)	1 (3.3%)
	Total	708 (78%)	159 (17.5%)	29 (3.1%)	7 (0.7%)	4 (0.4%)
2002	Male	676 (79.4%)	144 (16.9%)	23 (2.7%)	5 (0.6%)	3 (0.4%)
	Female	15 (50.0%)	9 (30.0%)	4 (13.3%)	1 (3.3%)	1 (3.3%)
	Total	691 (78.4%)	153 (17.4%)	27 (3.1%)	6 (0.7%)	4 (0.5%)
2003	Male	886 (79.6%)	169 (15.2%)	39 (3.5%)	19 (1.7%)	
	Female	34 (59.6%)	4 (7.0%)	12 (21.1%)	1 (1.8%)	6 (10.5%)
	Total	920 (78.6%)	173 (14.8%)	51 (4.4%)	20 (1.7%)	6 (0.5%)
2004	Male	487 (81.7%)	92 (15.4%)	12 (2.0%)	4 (0.7%)	1 (0.2%)
	Female	19 (52.8%)	7 (19.4%)	4 (11.1%)	3 (8.3%)	3 (8.3%)
	Total	506 (80.1%)	99 (15.7%)	16 (2.5%)	7 (1.1%)	4 (0.6%)
TOTAL		2825 (78.7%)	584 (16.3%)	123 (3.4%)	40 (1.1%)	18 (0.5%)

TABLE 4: The rate of students who had sexual intercourse with four or more partners during their life according to years.

	Total	Female	Male	X ² , p
2001	70 (14.6%)	2 (5.0%)	68 (15.5%)	3.248, 0.071
2002	81 (18.3%)	1 (7.0%)	80 (18.6)	2.960, 0.085
2003	234 (31.1%)	7 (14.3%)	227 (32.3%)	6.928, 0.008
2004	125 (30.8%)	4 (12.8%)	121 (31.8%)	11.197, 0.001
X ² , p	65.286, <0.001			

TABLE 5: Distribution of people having four or more sexual partners according to age groups, in years.

	<=17 yrs.	18 yrs.	19 yrs.	20 yrs.	>=21 yrs.	X ² , p
2001	1 (1.4%)	17 (24.3%)	19 (27.1%)	18 (25.7%)	15 (21.4%)	3.284, 0.511
2002	8 (9.9%)	30 (37.0%)	24 (29.6%)	11 (13.6%)	8 (9.9%)	0.208, 0.995
2003	32 (14.2%)	84 (37.3%)	51 (22.7%)	26 (11.6%)	32 (14.2%)	21.883, <0.001
2004	15 (16.3%)	39 (42.4%)	21 (22.8%)	13 (14.1%)	4 (4.3%)	8.706, 0.069

DISCUSSION

Sexuality is a private area of life determined with social rules, value judgments and taboos, with biological, psychological and social aspects. Sexuality of a person is closely related to every aspect of personality. The stormiest period of sexuality in human life is adolescent age. In this age, psychosexual and psychosocial developments are intermingled and adolescents are exposed to risky sexual behaviors. Besides, sexual misbehaviors at adolescent age can affect the person's life in the future significantly. Therefore, sexuality should be taken seriously at adolescent age. Certainly at first, present circumstances should be exposed with adequate researches. It should be kept in mind that in this process healthcare necessitates a continuity and especially due to dynamic changes in adolescents, this group should be continuously followed up and monitored.^{12,13}

The rate of sexual intercourse is increasing and the age of the first intercourse is decreasing. It has been reported that 60% of the girls and 70% of the boys encountered with sexual relations before the age of 18.¹⁴ However, as a reflection of the policies against sexually transmitted diseases and especially AIDS, in many developed countries, adolescents

are being informed about the risks of early and unprotected sexual activity. As a result of these policies, the age of first sexual intercourse is increased and sexual intercourse rate among adolescents is decreased in some countries. While in USA the rate of sexual intercourse between adolescent girls and boys was 53%/60% in 1988, these rates were 50% and 55% in 1998.¹⁵ In another study, the rate of sexual intercourse among adolescents was reported to drop from 54.2% to 48.4% between the years 1990 and 1997.¹⁶ In the four-year period of our study, the rate of sexual intercourse among adolescents increased at first, and stayed steady afterwards. Nevertheless, longer surveys are needed to talk about Turkish adolescent sexual activity trends.

In our study, the rate of having a sexual intercourse was 15 times more among boys compared to girls. Besides, sexual experience rate in our country is lower than Western countries in general, when it comes to girls, it is 20 times lower in our country.¹⁷ In Western countries, it has been reported that 41-60% of the girls and 45-70% of the boys did have a sexual intercourse.^{15,17,18} In Turkish community, especially girls are expected to be virgins when married.¹⁹ There are significant differences between cultures in terms of gender and percepti-

on of sexuality.²⁰ In a patriarchal society like Turkish community, the roles of men and women are mostly in favor of men. On the other hand, risky behaviors like fighting, carrying guns, avoiding seat belts, nicotine and alcohol abuse and unprotected sexual intercourse are more common in men than women in Turkey, as in other Western countries.²¹ We believe that the difference of sexuality between genders, which is one of the most significant outcomes of our study, should be evaluated within the framework of sexual role differences in our country. Factors like socio-cultural settings, value judgments, beliefs of the community and protective approaches of the parents especially to the daughters can help us to make an explanation for the difference of sexual experience between boys and girls. More detailed researches on the social environments, family structures and the beliefs of the individuals, which compare different cultures can help to light up this topic.

Even though the first sexual encounter of 80% of the participants with sexual experience was at 17 years of age or younger, the most common age to start sexual intercourse is between 19 and 20 years. A significant amount of teenagers are experiencing their first intercourse below 13 years of age in USA. These constituted 10.2% of sexually active teenagers in 1991, but it dropped to 7.4% in 2003.²² Again in USA, the rate of girls who experienced their first intercourse under the age of 13 (4.2%) is higher than the rate of all the sexually active girls in our research (3.2%).²² According to this, even though the results are not promising, compared to developed countries, it can be assumed that it is not too late when necessary precautions are taken. According to our research, the age of attending to university is 18. Even the teenagers starting university are going apart from the family and start a more independent life, it will take time for the teenagers to discover the new environment and to break free fully from parental supervision. Our research showed that the real critical age was the transition from 19 to 20 years. Therefore, it can be useful to

give lectures on sexual health to the students in the freshmen year, besides Turkish and History lessons. However, as it is known that risky behaviors are more common in the transition age from middle school to high school; researches should be planned for 15 years olds, too.²³

Among teenagers who have four or more sexual partners, there was a peak between 17 and 18 years. It was steady then, and a second peak was on the age of 21. Among sexually active adolescents in USA, the rate of having four or more sexual partners was 18.7% in 1991, which dropped to 14.4% in 2003.²² On the contrary, the rate of having four or more sexual partners, which was 14.6% in 2001, rose up to 32% in 2003 and continued steadily in our country. The raise in having multiple partners, which is especially important for the risk of sexually transmitted diseases, shows measures should be taken for preventing this undesirable trend in our country, like in developed countries.

While the ratio of girls/boys in terms of multiple partners is 1/2 in USA, it is almost 1/4 in our research.²² In our research, the lower rate of girls having multiple sexual partners, like in sexual experience, can also be linked to some factors like socio-cultural settings of the community, value judgments and protective approaches of the parents especially to their daughters.

CONCLUSION

This research is presenting the trend of sexual encounters of Turkish adolescents. Especially among male adolescents, the rates of multiple sexual partners and sexual intercourse tend to rise. With this knowledge, new multicentral and periodic researches representing the whole country should be initiated on other aspects of sexuality. Thus the health risks of the adolescents can be presented and necessary measures can be taken. Along with the primary care physicians; politicians, school administrations, teachers, parents and students should work hand in hand to establish this plan.

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