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CHANGES IN THE AWARENESS OF SOCIAL SCIENCES STUDENTS ON SEXUALLY TRANSMITTED DISEASES DURING A DECADE

ABSTRACT

We investigated the change in the status of awareness of the Social Sciences Faculty students on sexually transmitted diseases during ten years. The study was conducted in two stages each comprising 245 Social Sciences Faculty students first in 2000-2001 and the second in 2009-2010 educational years. Group I were composed of 40% female and 60% male, and Group II were of 34.7% female and 65.3% male students. The overwhelming majority of the students have responded unknown partner as risky for STDs. Significantly more students reported the chance of transmission of urethritis per intercourse for male partners correctly. By contrast, no change was observed in the responses that of for females. Lesser students responded the definition of honeymoon cystitis as urinary tract infection at first month. More students of all the groups found unsafe sexual experience to overcome first night failure anxiety risky for STDs. Overwhelmingly more students preferred medical doctors in case of STDs for treatment. Our results have clarified that during the last decade the awareness levels of the Social Sciences Faculty students on STDs have not increased. Formal sexual education should be a part of academic education least at the beginning years of university education

Keywords: Sexually Transmitted Diseases, Education, Public Health, Awareness, Students, Universities

SOSYAL BİLİMLER ÖĞRENCİLERİNİN CİNSEL YOLLA BULAŞAN HASTALIKLAR KONUSUNDA FARKINDALIKLARINDA SON ON YILDA GÖZLEMLENEN DEĞİŞİKLİKLER

ÖZET

Sosyal Bilimler öğrencilerinin son on yıl içerisinde cinsel yolla bulaşan hastalıklar (CYBH) konusunda farkındalık oranlarında ki değişimleri araştırdık. Her biri 245 kişiden oluşan 2000-2001 ve 2009-2010 eğitim yıllarından iki gurup üzerinde anket çalışması yapıldı. Grup I'in %40'ı kız ve %60'ı erkek ve Grup II ise %34.7 kız ve %65.3 erkek öğrencilerden oluşuyordu. Öğrencilerin ekseri çoğunluğu tanımadığımız biriyle ilişkiyi CYBH açısından riskli buluyordu. Anlamlı oranda daha fazla öğrenci erkekler için ilişki başına CYBH bulaşma riskini doğru olarak işaretlemişti. Ancak, bayanlardaki risk konusunda bir farklılık yoktu. Balayı sistitini doğru olarak tanımlayanların sayısında azalma gözlendi. Bütün guruplardaki öğrencilerin çoğunluğu ilk gece başarısızlığını yenmek amacıyla güvenli olmayan cinsel deneyimi CYBH açısından riskli bulmuştu. Öğrencilerin büyük ekseriyeti CYBH durumunda tedavi amacıyla tıp doktoruna başvurulması gerektiğini tercih etmişti. Sonuçlarımız, Sosyal Bilimler öğrencilerinin CYBH konusunda farkındalık oranlarının son on yıl içinde artmadığını gösterdi. Lisede verilen cinsel eğitim yanı sıra, üniversite hayatının başlangıç yıllarında da CYBH konusunda gençlere eğitim verilmesi gerektiğini öneriyor.

Anahtar Kelimeler: Cinsel Yolla Bulaşan Hastalıklar, Eğitim, Halk Sağlığı, Farkındalık, Öğrenciler, Üniversiteler

1. INTRODUCTION (GİRİŞ)

We previously investigated and reported the status of sexual experience and awareness of the Social Sciences Faculty students during ten years, and reported increased percentage of the students confessing sexual experience [1]. In this study, we aimed to determine the change in the awareness of the same students about risky sexual behaviours for the common sexually transmitted diseases (STD) depending on gender, and rural and urban origin of the students.

The rapid socio-cultural transformation prevailing in the period of integration of our country with the European Union over the last decade carries serious risks, especially among the young. The sexual education of adolescents is not yet structured adequately in Turkey. Previous reporters [2] have stressed the need for studies to interrogate the knowledge and awareness of the students on STDs from the developing eastern part of our country. We preferred social science students because, they undergo ordinary health sciences lessons, and no formal lessons on sexuality and STDs have been taken at University. Studies on STDs have been encouraged because of the reported gradually increased incidence [3]. Previous reports have suggested that knowledge of the university students on STDs not yet adequate [4]. Moreover, most of them have mainly focused on HIV/AIDS, and risky population for more prevalent STDs and the risky behaviors and the status of awareness for them have been ignored [5 and 6].

2. RESEARCH SIGNIFICANCE (ÇALIŞMANIN ÖNEMİ)

In the last decade, our country has entered the process of integration with the European Union. In this process, social change and transformation have been experienced. Sexually Transmitted Diseases (STDs) has become one of the most important issues of our time. Because of concentration of education and information mainly on HIV/AIDS, the information on more common STDs has been ignored. We performed a survey analyses on Social Sciences Faculty students who did not receive formal sexual education. Our findings demonstrated that awareness levels of the students have been worsened, because of lack of formal education and prevailing misinformation through the media and internet. Adequate information and awareness levels should be obtained for healthy sexual relationship and healthy next generations. The positive results of providing this education during the high-school are well known. Our findings suggest continuation of education at least at the initial years of University and importance of peer education.

3. MATERIALS AND METHODS (MATERİAL VE METOTLAR)

We carried out a cross-sectional comparative survey of all four grades of students in the Social Sciences Faculty in the eastern part of Turkey. The data were collected in February of the 2000-2001 and 2009-2010 academic years. The participants were 245 students from each academic year. We used the same questionnaire to determine the demographics, sexual experience and preferences of the students.

The research aims were explained to the participants and the administration, and consents to participation in the study were obtained. Researchers explained to students the purpose of the study and emphasized that participation was totally voluntary. They were given assurances that the information they provided would be kept confidential and were asked not to write their names or any kind of identifying information. An anonymous questionnaire in Turkish was given to the students after completion of the information. To ensure maximum objectivity in students' answers, researchers were instructed not to give any additional clarification for questions which were not

understood. The students were asked to feel free not to fill in the questions which they did not consider appropriate.

A self-administered questionnaire was developed based on the literature and an assessment of reliability. The questionnaire was composed of 13 questions, three of them including personal features such as; age group (Q1), gender (Q2) and the regional origin of students (Q3), and ten of them interrogating; definition of risky partner for sexual intercourse (Q4), risk of transmission of urethritis per intercourse for male (Q5), risk of transmission of urethritis per intercourse for female (Q6), most prominent complication of urethritis in males (Q7), most prominent complication of urethritis in females (Q8), definition of honeymoon cystitis (Q9), first sign of Syphilis (Q10), their opinion on unsafe sexual experience to overcome first night failure anxiety (Q11), preference of the students with STDs for help (Q12) and their knowledge on the treatment of urethritis (Q13).

4. ISTATISTICAL ANALYSIS (İSTATİSTİKSEL ANALİZ)

The differences between study groups were analyzed by the Pearson X^2 test and Fisher's Exact Test. All analyses were performed using the Statistical Package for Social Sciences (SPSS) for windows, version 17.0. The statistical significance was set at $p<0.05$. Missing values were not replaced, and variables were analyzed as available. Percentages were used here for presentation of data.

Group sample sizes of 245 in Group I and 245 in Group II achieved 100% power to detect a difference between the group proportions of -0.27. The proportion in Group I is assumed to be 0.72 under the null hypothesis and 0.45 under the alternative hypothesis. The proportion in Group II is 0.72. The test statistic used is the two-sided Mantel-Haenszel test. The significance level of the power analysis test was targeted at 0.05. The significance level actually achieved by this design is NA [7, 8 and 9].

5. RESULTS (SONUÇLAR)

Socio-demographic characteristics of the participating students have been given and discussed in our previous report [1]. Briefly, the age of the participating students attending the Social Sciences Faculty have minimally decreased. Group I were composed of 40% female and 60% male, and Group II were 34.7% female and 65.3% male students. This difference was also not significant. By contrast, the region of origin of the participating students among the groups differed highly significantly over the ten year period ($p<0.001$). The number of participating students attending the Social Sciences Faculty from rural areas has more than doubled in a decade (from 13.5% to 31.4%).

Table 1. Distribution of social and demographic characteristics, and changes in the awareness of the sexually transmitted diseases of the students during a decade
(Tablo 1. Öğrencilerin sosyal ve demografik özellikleri ve cinsel yolla bulaşan hastalıklar konusundaki farkındalık oranlarının dağılımı)

Questions		GI N (%)	GII N (%)	P-Value (Pearson X^2)
Age	< 20	43 (17.6)	69 (28.2)	0.322
	20-25	178 (72.7)	112 (45.7)	
	> 20	24 (9.8)	64 (26.1)	
Sex	Female	98 (40.0)	85 (34.7)	0.226
	Male	147 (60.0)	160 (65.3)	
Region of origin	Rural	33 (13.5)	77 (31.4)	0.000
	Urban	212 (86.5)	168 (68.6)	
Risky for contagious STD	Known partner	42 (18,4)	57 (25,3)	0,075
	Unknown partner	186 (81,6)	168 (74,4)	
Transmission of urethritis per intercourse for males is	90%	35 (16,1)	44 (18,1)	0,001
	20%	91 (41,9)	137 (56,4)	
	50%	91 (41,9)	62 (25,5)	
Transmission of urethritis per intercourse for females is	40%	84 (39,8	66 (27,5)	0,009
	10%	86 (40,8)	130 (54,2)	
	80%	41 (19,4)	44 (18,3)	
Most prominent complication of urethritis in males is	Ejeculatio precox and infertility	107 (50,2)	79 (33,2)	0,000
	Lumbar and articular pain	91 (42,7)	98 (41,2)	
	Arteriosclerosis	15 (7,0)	61 (25,6)	
Most prominent complication of urethritis in females is	Menometroragia	99 (46,9)	96 (41,2)	0,000
	PID	103 (48,8)	79 (33,9)	
	dizziness, vertigo	9 (4,3)	58 (24,9)	
Honeymoon cystitis is	UTI at first months	61 (34,5)	48 (20,8)	0,000
	Unwillingness for copulation	61 (34,5)	69 (29,9)	
	Dyspareunia	55 (31,1)	114 (49,4)	
First sign of Syphilis is	Urethral discharge	71 (56,8)	68 (37,6)	0,001
	Clean hard ulcer at groin	26 (20,8)	72 (39,8)	
	Dirty soft ulcer at groin	28 (22,4)	41 (22,7)	

Table 1				
Unsafe sexual experience to overcome first night failure anxiety	Not risky and it's a tradition	76 (36,9)	81 (37,2)	0,955
	Risky for STDs	130 (63,1)	137 (62,8)	
Preferences of the students with STD for help is	Medical doctor	161 (69,1)	130 (53,1)	0,000
	Medical officer	3 (1,3)	52 (21,2)	
	Friend	69 (29,6)	50 (20,4)	
	Drugstore servant	0 (0,0)	13 (5,3)	
Urtehritis is treated with	A single dose antibiotic	10 (4,5)	57 (23,5)	0,000
	No need for drugs	11 (5,0)	73 (30,0)	
	An urologist's prescription	201 (90,5)	113 (46,5)	
Group I = 245 Social Sciences Faculty students of 1999-2000 educational year, Group II = 245 Social Sciences Faculty students of 2009-2010 educational year.				

Table 1 shows the comparison of the change in the distribution of the responses among participating two groups of students. The distribution of responses among the participating male and female students is shown in table 2, and that of the students coming from rural and urban areas is shown in table 3. The overwhelming majority of the students were found unknown partner as risky for STDs. There were no significant difference among Group I and II students, female students and students coming from urban areas. By contrast, significantly more male students and students coming from rural areas found known partner as risky for STDs.

Table 2. Distribution of awareness of the sexually transmitted diseases among male and female students during a decade
(Tablo 2. Son on yılda erkek ve kız öğrencilerin cinsel yolla bulaşan hastalıklar konusundaki farkındalık oranlarının dağılımı)

Questions		Male GI (%)	Male GII (%)	P-Value (Pearson X^2)	Female GI (%)	Female GII (%)	P-Value (Pearson X^2)
Risky for contagious STD	Known partner	14 (10,1)	27 (18,2)	0,048	28 (31,5)	30 (39,0)	0,312
	Unknown partner	125 (89,9)	121 (81,8)		61 (68,5)	47 (61,0)	
Transmission of urethritis per intercourse for males is	90%	21 (15,7)	24 (15,1)	0,093	14 (16,9)	20 (23,8)	0,002
	20%	60 (44,8)	90 (56,6)		31 (37,3)	47 (56,0)	
	50 %	53 (39,6)	45 (28,3)		38 (45,8)	17 (20,2)	
Transmission of urethritis per intercourse for females is	40%	50 (37,9)	41 (26,5)	0,077	34 (43,0)	25 (29,4)	0,120
	10%	57 (43,2)	86 (55,5)		29 (36,7)	44 (51,8)	
	80%	25 (18,9)	28 (18,1)		16 (20,3)	16 (18,8)	
Most prominent complication of urethritis in males is	Ejeculatio precox and infertility	63 (46,3)	56 (35,2)	0,000	44 (57,1)	23 (29,1)	0,000
	Lumbar and arthicular pain	64 (47,1)	64 (40,3)		27 (35,1)	34 (43,0)	
	Artheriosclerosis	9 (6,6)	39 (24,5)		6 (7,8)	22 (27,8)	
Most prominent complication of urethritis in females is	Menometroragia	69 (54,3)	55 (34,5)	0,000	30 (35,7)	45 (52,9)	0,000
	PID	51 (40,2)	51 (37,2)		52 (61,9)	24 (28,2)	
	dizziness, vertigo	7 (5,5)	42 (28,4)		2 (2,4)	16 (18,8)	
Honeymoon cystitis is	UTI within first months	34 (29,3)	30 (19,9)	0,033	27 (44,3)	18 (22,5)	0,006
	Unwillingness for copulation	43 (37,1)	47 (31,1)		18 (29,5)	22 (26,2)	
	Dyspareunia	39 (33,6)	74 (49,0)		16 (26,2)	40 (50,0)	
First sign of Syphilis is	Urethral discharge	52 (55,9)	50 (40,0)	0,016	19 (59,4)	18 (32,1)	0,032
	Clean hard ulcer at groin	20 (21,5)	49 (39,2)		6 (18,8)	23 (41,1)	
	Dirty soft ulcer at groin	21 (22,6)	26 (20,8)		7 (21,9)	15 (26,8)	
Unsafe sexual experience to overcome first night failure anxiety	Not risky and it's a tradition	54 (42,5)	57 (40,7)	0,765	22 (27,8)	24 (30,8)	0,688
	Risky for STDs	73 (57,5)	83 (59,3)		57 (72,2)	54 (69,2)	
Preferences of the students with STD for help is	Medical doctor	85 (60,3)	83 (51,9)	0,000	76 (82,6)	47 (55,3)	0,000
	Medical officer	1 (0,7)	37 (23,1)		2 (2,2)	15 (17,6)	
	Friend	55 (39,0)	31 (19,4)		14 (15,2)	19 (22,4)	
	Drugstore servant	0 (0,0)	9 (5,6)		0 (0,0)	4 (4,7)	
Urtehritis is treated with	A single dose antibiotic	7 (5,1)	33 (20,8)	0,000	3 (3,6)	24 (28,6)	0,000
	No need for drugs	9 (6,5)	55 (32,1)		2 (2,4)	22 (26,2)	
	An urologist's prescription	122 (88,4)	75 (47,2)		79 (94,0)	38 (45,2)	

Group I = 1999-2000 educational year students of Social Sciences Faculty, Group I = 2009-2010 educational year students of Social Sciences Faculty

Table 3. Distribution of awareness of the sexually transmitted diseases of the students from rural and urban during the last decade (Tablo 3. Kırsal ve kentsel orjinli öğrencilerin son on yıl içerisindeki cinsel yolla bulaşan hastalıklar konusunda farkındalık oranlarının dağılımı)

Questions		Rural GI	Rural GII	P-Value (Pearson X^2)	Urban GI	Urban GII	P-Value (Pearson X^2)
Risky for contagious STD	Known partner	3 (10,3)	23 (31,5)	0,027*	39 (19,6)	34 (22,4)	0,526
	Unknown partner	26 (89,7)	50 (68,5)		160 (80,4)	118 (77,6)	
Risk of transmission of urethritis per intercourse for males is	90%	6 (21,4)	28 (16,9)	0,321	16 (20,8)	29 (15,3)	0,007
	20%	12 (42,9)	44 (57,1)		79 (41,8)	93 (56,0)	
	50%	10 (35,7)	17 (22,1)		81 (42,9)	45 (27,1)	
Risk of transmission of urethritis per intercourse for females is	40%	10 (35,7)	20 (26,0)	0,616	74 (40,4)	46 (29.0)	0,023
	10%	13 (46,4)	42 (54,5)		73 (39,9)	88 (54,0)	
	80%	5 (17,9)	15 (19,5)		36 (19,9)	29 (17,8)	
Most prominent complication of urethritis in males is	Ejeculatio precox and infertility	13 (50,0)	32 (42,1)	0,304	94 (50,39	47 (29,0)	0,000
	Lumbar and arthicular pain	11 (42,3)	28 (36,8)		80 (42,8)	70 (43,2)	
	Artheriosclerosis	2 (7,7)	(21,1)		13 (7,0)	45 (27,8)	
Most prominent complication of urethritis in females is	Menometroragia	11 (42,3)	33 (44,6)	0,397	88 (47,6)	63 (39,6)	0,000
	PID	12 (46,2)	25 (33,8)		91 (49,2)	54 (34,0)	
	dizziness, vertigo	3 (11,5)	16 (21,6)		6 (3,2)	42 (26,4)	
Honeymoon cystitis is	UTI at first months	7 (29,2)	20 (28,2)	0,986	54 (35,3)	28 (17,5)	0,000
	Unwillingness for copulation	7 (29,2)	22 (31,0)		54 (35,3)	47 (29,4)	
	Dyspareunia	10 (41,7)	29 (40,8		45 (29,4)	85 (53,1)	
First sign of Syphilis is	Urethral discharge	10 (58,8)	18 (31,6)	0,073	61 (56,5)	50 (40,3)	0,003
	Clean hard ulcer at groin	6 (35,3)	24 (42,1)		20 (18,5)	48 (38,7)	
	Dirty soft ulcer at groin	1 (5,9)	15 (26,3)		27 (25,0)	26 (21,0)	
Unsafe sexual experience to overcome first night failure anxiety	Not risky and it's a tradition	13 (56,5)	39 (56,5)	0,594	63 (34,4)	42(28,2)	0,000
	Risky for STDs	10 (43,5)	30 (42,5)		120 (65,6)	107 (71,8)	
Preferences of the students with STD for help is	Medical doctor	20 (64,5)	33 (42,9)	0,006	141 (69,8)	97 (57,7)	0,000
	Medical officer	0 (0,0)	17 (22,1)		3 (1,5)	35 (20,8)	
	Friend	11 (35,5)	20 (26,0)		58 (28,7)	30 (17,9)	
	Drugstore servant	0 (0,0)	7 (9,1)		0 (0,0)	6 (3,6)	
Urtehritis is treated with	A single dose antibiotic	2 (6,9)	21 (27,3)	0,000	8 (4,1)	36 (21,7)	0,000
	No need for drugs	1 (3,4)	25 (32,5)		10 (5,2)	48(28,9)	
	An urologist's prescription	26 (89,7)	31 (40,3)		175 (90,7)	82 (49,4)	

Group I = 1999-2000 educational year students of Social Sciences Faculty, Group II = 2009-2010 educational year students of Social Sciences Faculty, *: Fisher's Exact Test.

Significantly more students responded the chance of transmission of urethritis per intercourse for male partners correctly among group II, female students and students coming from urban areas, but not among males and rural origin students. By contrast no changes in the percentage of the students have been observed for the chance of transmission of urethritis per intercourse for female partners among all the groups. The ratios of true responders of most prominent complication of urethritis in males as ejeculatio precox and infertility have dropped significantly among Group I and II, in both gender, and urban origin students, but lesser decrease were observed among rural origin students. The ratios of true responders of most prominent complication of urethritis in females as pelvic inflammatory disease (PID) have dropped significantly among all the groups and most prominent drop were observed among female students. Lesser students responded the definition of honeymoon cystitis as urinary tract infection at first month during a decade. Significantly more students correctly answered first sign of Syphilis as clean hard ulcer at the groin among all the groups during a decade. But correct responders were always less than half of the participating students.

More students of all the groups found unsafe sexual experience to overcome first night failure anxiety risky for STDs, but not among rural origin students. Overwhelmingly more students preferred medical doctors in case of STDs for treatment. But, this preference has dropped during a decade among all the groups. Although, more students preferred urologist's prescription for the treatment of urethritis, the percentages of the students preferring urologist's prescription have dropped significantly during a decade among all the groups.

6. DISCUSSION (TARTIŞMA)

Our results have clarified that during the last decade the awareness levels of the Social Sciences Faculty students on STDs have not increased. Even some clear and risky decreases have been observed. Around 20% of the students reported known partner as risky for STDs.

This may stem from lack of confidence to their known partners. The decrease was more prominent among male gender and rural origin students. Awareness of the students for the risks of urethritis per intercourse for males and females are also less than half of the participants for males and less than a quarter among male and female gender, and rural and urban origin students. Complications of the urethritis were also not answered correctly by around half the students. The association between sexual intercourse and subsequent acute symptomatic urinary-tract infection in women within the first moth is often labeled as honeymoon cystitis. A significant drop was observed in correct definition of honeymoon Cystitis (34.5 vs. 20.8) during the last decade. By contrast, the percentage of correct responders for the first sign of Syphilis has significantly increased during the last decade, among both genders and urban origin students. A borderline increase in the response rate was observed among rural origin students (35.3 vs 42.1). These findings suggest that the awareness of the participating students on risks of transmission STDs and its complications is still not in satisfying levels. Incorrect knowledge is prevailing among them and this has not been changed during the last decade. Other researchers from our Country have also confirmed the lack of knowledge levels of university students [10 and 11]. A questionnaire on knowledge of sexually transmitted diseases (STDs) was applied to 630 Victorian university students. Overall students demonstrated moderate levels of knowledge. They had more knowledge about the labels than they did about symptoms and transmission modes and were misinformed about certain clinical aspects

of STDs. The reporters comment that identification of a label is of limited personal value if there is no concurrent knowledge about disease transmission and prognosis [12]. Another study from the same Country reported that youth of rural origin had adequate knowledge on HIV/AIDS, but not on common STDs [13]. A study from Nigeria reported that 92% of the students declared having sexual experience and their knowledge on transmission and symptoms of HIV/AIDS were found adequate [14]. Another study from Nigeria reported good general awareness of the common STDs, HIV/AIDS of adolescent female high school students [15]. Similar findings were suggested from our Country that awareness levels of STDs of youths with formal sexual education were meaningfully higher [3].

Turkish society, especially inhabitants of conservative eastern Anatolia, is very sensitive for first night sexual performance of just married couples. It bears plenty of traditional meanings. Families and just married couples undergo high level of anxiety during wedding ceremonies. To overcome first night sexual performance anxiety, some but not less prefer to test the groom just before the marriage with usually unsafe risky relationship. Overall 34% of the students responded that they find unsafe sexual experience to overcome first night failure anxiety as traditional and not risky. This ratio was increased to 42% among males and 56,5% among rural origin students.

Moreover, this approach did not change during the last decade. As a result, this tradition still survives as a real problem of Turkish society for the spread of STDs.

More than half of the students preferred medical doctors in case of STDS, though this preference is significantly dropped from 69.1% to 53.1% during the last decade. Most prominent decrease was observed among female students (from 82.6 to 55.3). Discussing with a close friend always came as a second preference of the students. In case of urethritis, the number of students preferring to attend to an urologist is significantly dropped during the last decade among all the responders. This and other superstitious mentality may stem from misinformation spreaded throughout media and internet during the last decade.

Our study has several limitations. First, its cross-sectional design was limited in evaluating cause-and-effect associations. Second, the results obtained in our study should not be generalized to all young Turkish people or to all Turkish university students, because our sample population was so small and located in the sparsely populated eastern part of Turkey. The socio-demographic or socio-economic characteristics of regions in our country show great diversity.

7. CONCLUSION (SONUÇ)

Present inadequate level of awareness of the students on transmission, sign and complications of STDs increases the risks for them. Misinformation spreaded by way of media and internet produced false self confidence about STDs among young people. Our results confirmed that things getting worse than the past generations. Academic efforts should be concentrated on finding effective ways to provide easily obtained true information for youths. Efforts should concentrate on providing the students with adequate information officially and peer education. Furthermore, formal sexual education should be a part of academic education least at the beginning years of university education.

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NOTICE (NOT)

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