Condom-related beliefs among Turkish university students

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Abstract
Young people are at a high risk of contracting HIV/AIDS (Human Immunodeficiency Virus/Acquired Immunodeficiency Syndrome) and Sexually Transmitted Infections (STI). However, their rate of condom use is low. The purpose of the study is to investigate health beliefs affecting condom use among Turkish university students. A cross-sectional survey was conducted from June to September of 2007. Two hundred and fifty-four (254) university students were interviewed using a questionnaire. A logistic regression was used to identify factors associated with condom use. Sixteen (16) percent of the females and 67 percent of the males used condoms during their last sexual intercourse. Failure to use a condom was related to a perceived reduction in sexual satisfaction [OR = 5.46 (1.69 – 17.60)] and financial limitations [OR = 2.76 (1.46 – 5.20)]. These data will be useful in designing and improving HIV/STD prevention programs in Turkey.

Keywords: Condom-related beliefs; university students; Turkey.

1. Introduction

Risky sexual behavior can lead to unwanted pregnancy or the contraction of a sexually transmitted disease (STD), including infection with human immunodeficiency virus/acquired immunodeficiency syndrome (HIV/AIDS). World Health Organization (WHO, 2007) has reported that every year there are more than 340 million cases having bacterial and protozoal Sexually Transmitted Diseases (STD). Globally, all these infections constitute a huge health and economic burden, especially for developing countries where they account for 17% of economic losses caused by ill-health.

Adolescents who have sex with more than one partner often prefer condoms because condom is about the only method that protects against HIV/AIDS and other STI's as well as pregnancy. But, the rate of their use of condom is low. For example, among Turkish youngsters at university,

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approximate %50 percent unprotected sexual intercourse is identified (HUMF, 2004; Guner et al., 2005)

Adolescents' use of condom and intention to use condom may be influenced by their belief in the use of condoms. According to Hounton, Carabin, & Henderson (2002), those who perceived condom use competence (9.8 times) and the quality of condom use (3.6 times) low are more unsuccessful in condom use. Yahata and his colleagues (2001) found out that the frequency of condom use among the youngsters who believed that condoms were effective in being protected from HIV/AIDS was 2.6 times more than that of the others. According to Edem and Harvey (1995), perceived benefits to condom use, perceived barriers to condom use, and cues to action were significantly associated with past condom use, while condom barrier beliefs and condom benefits perceptions were significant predictors of intentions to use condoms in the future.

In order to understand the behavior of young people who do not use condoms, it is essential to determine the beliefs that predispose condom use and non-use. The HBM was reported to be one of the most widely used behavioral frameworks for more than five decades but has been criticized for its inability to efficiently predict people's behavior (Hiltabiddle, 1996). There is general agreement that the components of HBM should include self-efficacy and cues to action, and that susceptibility and severity should be conditional on action or inaction. This model can also be utilized as a basis for explaining young people's beliefs about safe sex.

Purpose

The purpose of this study is therefore to examine the Turkish university students' beliefs about condom use and the determining variables in condom use, utilizing HBM as a basis.

To this end, this article addresses the following question:

1. Will students' beliefs influence their condom use behavior?

2. Method and material

2.1. The place and time of the study

This study was carried out in a faculty of a state university in Istanbul. Time of study was between April and December 2007.

2.2. Population and sample selection

Students were eligible to participate if they were at least 18 years old. The participants were 254 university students between the ages 21.87+1.96 and 18-29 years.

2.3. Type of study

The study was descriptive design.

2.4. The variables

The dependent variable for this study is condom use.

2.5. Data collection

2.5.1. Data collection method

A pencil and paper questionnaires were administered to groups of approximately 10 to 30 students in university classrooms. It took 30 to 45 minutes for participants to complete the questionnaire.

2.5.2. Data collection tools

In this study, a Questionnaire, which has been designed to identify some socio –demographic characteristics of the participants and "Condom-Related Health Beliefs Questionnaire", which has been prepared on the basis of HBM by the researchers, were used as data collection instruments.

Socio-demographic Questionnaire

Socio-demographic Questionnaire consists of 8 questions including questions about age, gender, the place where the participants lived before, accommodation, perceived income level (perceived income level was measured on a 5-points Likert scale: 1=very bad, 2=bad, 3=middle, 4=good, 5=very good), religiosity level (a 0-10 point visual analogue scale was used to measure the participants' perceived religious/spiritual beliefs), participants' evaluation about their sex knowledge, and whether they used condom in their last sexual intercourse. Sexual intercourse was defined explicitly in the questionnaire (e.g., a male's penis in a female's vagina).

Condom-Related Health Beliefs Questionnaire

Participants also responded to a 12-item measure based on the *Health Belief Model* that assessed attitudes and beliefs associated with condom use and sex. Each item was scored on a two-point scale from "Agree" to "Disagree." This measure consists the following items: "The use of a condom is good for my health", "Sex is more enjoyable if it's planned with time.", "Sex should only be had with the same person during a whole lifetime.", "I would rather risk getting a disease, than not having sex.", "It is very difficult to get AIDS, even without protection.", "The woman is the one who should request the use of a condom.", "The man is responsible for protection during the sexual act.", "The woman should bring the condoms.", "The man is the one who should buy the condoms.", "The use of a condom decreases sexual satisfaction..", "Sex should be spontaneous", and "My financial situation allows me to buy condoms."

2.5.3. Data collection time

Data were collected between June and September 2007.

2.6. Limitations of the study

The major limitation of this study was that it was conducted into a small sampling. Condom use, in our study population, depends on its perceived barriers. Future studies must focus more extensively on addressing stigmatizing beliefs and providing education to overcome barriers to condom use.

2.7. The generalizability of the study

Since findings from this study were collected only from an university, they cannot be generalized to the overall population.

2.8. Research ethics

The study was approved by the faculty administration. Students were invited to participate in the study and were informed before verbal consent was obtained. The data was collected in a covering letter and the researchers guaranteed students that their identities and answers would be kept confidential. Completed questionnaires were stored securely.

2.9. Evaluation of data

The data was analyzed using SPSS for Windows (version 11.5 SPSS). The analysis included descriptive statistics, cross-tabulation and logistic regression. The following variables were included in the analysis: condom use beliefs items and condom use during the last sexual intercourse.

3. Results

Socio-demographic characteristics

The mean age of the females participated in the study was 21,46±1,47 and it was 22,12±2,18 for males. Majority of the females (%43) previously lived in districts, villages, or boroughs while majority of the males (%45) lived in cities. Vast majority of the females (%66) and males (%83) lived in the dormitories. The youngsters' perceived income level is 3,47±1,60 for females and 3,12±1,75 for males. Perceived religiosity level for females is 5,48±3,75 while for males it is 5,17±3,62. Vast majority of the females (%76) and males (%87) have stated that they were not informed about reproductive and sexual health. 16 percent of the females and 67 percent of the males used condoms in their last sexual intercourse.

Females and males are different (p<0,05)in terms of the mean age, the place where they lived previously, current accommodation, getting informed about sexual / reproductive health, and use of condom in the last sexual intercourse variables while they are similar (p>0,05) in terms of perceived level of income and perceived religiosity level (Table 1).

Table 1. The distribution of the socio-demographic characteristics with respect to youngsters' gender (N=254)

Variables	Female (n=59)	Male (n=155)	Statistics
Age (mean± SS)	21,46±1,47	22,12±2,18	t= -2,643 p=,009*
The place where they lived previously			
Metropolis	24 (24,2)	42 (27,1)	X²=6,442
City	32 (32,3)	69 (44,5)	p= ,040*
district, village, borough	43 (43,4)	44 (28,4)	
Accommodation			
Dormitory/hostel	65 (65,7)	128 (82,6)	
House with male/female friends	19 (19,2)	8 (5,2)	X²=13,843
Stay with family or relatives	15 (15,2)	19 (12,3)	p= ,001*
Perceived level of income ** (mean± SS)	3,47 (1,60)	3,12 (1,75)	Z_MU=-1,687 p=,092
Perceived level of religiosity*** (mean± SS)	5,48 (3,75)	5,17 (3,62)	Z_MU=-0,769 p=,442
Getting informed about sexual/reproductive health			
Yes	24 (24,2)	20 (12,9)	X²=5,424
No	75 (75,8)	135 (87,1)	p= ,020*
Use of condom in the last sexual intercourse			
Yes	16 (16,2)	104 (67,1)	X²=62,885
No	93 (83,8)	51 (32,9)	p= ,000*

* p>0.05
** the least-the most=1-5
*** the least-the most=0-10
X²= Chi-square
t= t test for the independent groups

Condom-Related Health Belief Items

When the youngsters' responses to the condom-related health beliefs are considered, the participants disagreed with the following items by the following percentages: "I would rather risk getting a disease, than not having sex" by 92%, "It is very difficult to get AIDS, even without protection" by 92%, "the woman should bring the condoms" by 87%, "the man is responsible for protection during the sexual act" by 77%, "the woman is the one who should request the use of a condom" by 63%, "the man is the one who should buy the condoms" by 58%, "the use of a condom decreases sexual satisfaction" by 54%, and "sex should be spontaneous" by 33%. 83 percent of the young people in the study agreed with the item "the use of a condom is good for my health"; 69% agreed with the item "my financial situation allows me to buy condoms"; 63% of them agreed with the item "sex should only be had with the same person during a whole lifetime"; and 54% of the participants agreed "sex is more enjoyable if it's planned with time" (Table 2).

Table 2. The distribution of the youngsters' responses to the condom-related health beliefs (N=254).

Items	Disagree (%)	Agree (%)
1.The woman is the one who should request the use of a condom	159 (62,6)	95 (37,4)
2.The man is the one who should buy the condoms	147 (57,9)	107 (47,1)
3.The man is responsible for protection during the sexual act	196 (77,2)	58 (22,8)
4. The woman should bring the condoms.	220 (86,6)	34 (13,4)
5.Sex should be spontaneous	83 (32,7)	171 (67,3)
6.The use of a condom is good for my health	45 (17,7)	209 (82,3)
7.Sex should only be had with the same person during a whole lifetime	159 (62,6)	95 (37,4)
8. My financial situation allows me to buy condoms.	80 (31,5)	174 (68,5)
9. Sex is more enjoyable if it's planned with time.	117 (46,1)	137 (53,9)
10. The use of a condom decreases sexual satisfaction.	137 (53,9)	117 (46,1)
11. I would rather risk getting a disease, than not having sex.	233 (91,7)	21 (8,3)
12. It is very difficult to get AIDS, even without protection.	234 (92,1)	20 (7,9)

The determinant variables in the use of condom in the last sexual intercourse

When the variables determining whether the young people used condom in the last sexual intercourse were included in the model, 2 out of 12 variables proved to be determinants. Among the participants, for those who agreed with the item, "Use of condom causes decrease in sexual satisfaction", use of no condoms was 5.5 times (OR=1,7-17,6) and for those who disagreed with the item, "My financial situation is good enough to buy condoms", the use of no condoms was 2.8 times higher (OR=1,5-5,2) (Table 3).

Table 3. Logistic Regression: The determinant variables in the use of condom in the last sexual intercourse

	β	Standard Error	Wald	p	Odds	(95%) Confidence Interval
"Use of condom causes decrease in sexual satisfaction" (agree)	1,697	,598	8,060	0,01	5,46	1,691-17,604
"My financial situation is good enough to buy condoms" (disagree)	1,014	,324	9,771	,002	2,76	1,460-5,204

4. Discussion

This study was the first ever to use the Health Belief Model (HBM) as a basis for assessing condom use behavior among Turkish university students. The results of the study indicated that most university students, majority of whom were staying in dormitories, having medium level of income and medium level of religiosity did not obtain any information about reproductive health. In addition, the percentage of using condoms in the last sexual discourse found out to be lower particularly for females when compared to males. This situation supports the suggestion that the youngsters in the study group having insufficient knowledge and using no condoms are at risk in terms of STD including HIV/AIDS.

"Perceived barriers", one of the main elements of behavioral change according to the Health Belief Model represents perceived tangible or psychological barriers to accomplish the advised action and undesirable consequences thought to result from this action. In this study, the belief that that condom use causes a decrease in sexual satisfaction was found as a predicator perceived barrier (5.5 times). Sunmola (2005) found that men and women reported that condoms hindered their sexual satisfaction, caused health problems for them and reduced their sexual interest. Similarly, Volk & Kopman (2001) presented that in their studies examining condom use and HBM components, the frequency of condom use decreased for those whose perceived barriers were high. According to Winfield and Whaley (2002), perceived barriers and gender were the only significant predictors of condom use.

In another study conducted in Turkish society, the perception of young people about "Use of condom is difficult" or "Condom is an ineffective method in protecting them against infection with

AIDS" proved to be the most significant barrier to using condom behavior. (Ates, Karahan &Erbaydar, 2005). Similarly, in their study Hounton, Carabin & Henderson (2005) found out that perceiving condom as ineffective (9.8) and having reported problems with using the condom (3.6) were both associated with the lack of use of condom.

On the other hand, in another study conducted with adolescents, the strongest determinant of consistency in condom use was pointed out to be "the partner preference for condom use and pregnancy prevention" which is one of the perceived benefits. (Larague et al., 1997).

In the present study, one of the specific barriers determining the condom use was found to be the cost. Among the young people participated in the study, for those who mentioned their financial situation allowed them to buy condoms, the frequency of condom use is 2.8 times higher than the rest.

Edem and Harvey (1995) indicated in their study that specific barriers to condom use cited by these students included cost, embarrassment surrounding purchase, and accessibility (condoms at subsidized prices are channeled through maternal-child health clinics), while the only benefit of condom use cited was prevention of unwanted pregnancy. In Turkey, neither the policy on reproductive health services for unmarried youngsters is sufficient nor there are centers where the young people obtain condoms for free. This requires that the young people buy these services from the private health centers or institutions like pharmacy.

Relevant cues to action were discussions of AIDS with family, friends, and health professionals and taking a university course on AIDS. Of concern was the lack of perception of condoms as a means of preventing the transmission of sexually transmitted diseases, including AIDS.

5. Conclusions and recommendations

In this study, although the young peoples' condom use beliefs haven't been investigated in terms of cues to action dimension, it has been known that there is no pragmatic education about reproductive health for young people. To meet this need, the programs to be carried out by their peers may play a key role in the places, such as the dormitories, where young people live in groups.

5.1. Usability of study results

Condom use, in our study population, depends on its perceived barriers. Future studies must focus more extensively on addressing stigmatizing beliefs and providing education to overcome barriers to condom use. HIV outreach programs must target more barriers of condoms use. Condom outreach programs should be defined at community level and must be defined in association with the community, using problem-solving techniques and selecting the most relevant

targets, based on their importance and changeability. Within this scope, it is necessary to eliminate the barriers to benefit from reproductive health services for youngsters and to create systems (condom boxes, and so on) where young people in particular obtain condoms for free of charge.

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