

The condom use among young adults and its determinants: an Italian study”

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Abstract

Numerous health risk behaviours have been identified as an issue in early adulthood, especially among university students, a particularly high-risk category for sexual and reproductive health. The aim of this study is to examine the condom use and its determinants among young adult in Italy. The hypothesis is that individuals' demographic characteristics (gender, faculty, to have a committed partner, to be resident) and the risk perception may play a role in condom use. The results indicate that the frequency of condom use is related to the magnitude of risk perception of certain STIs and to demographic characteristics. All the STI risks perception and the risk perception of unintended pregnancy are statistically significant associated with frequency of condom use ($p < 0.001$). By contrast the frequency of condom use is not statistically significant associated with the following demographic characteristics: gender, faculty, to have a committed partner, to be resident. Furthermore association with age groups is observed ($p = 0.030$).

Findings suggest that universities have an opportunity to access young people's sexual health risk behaviours and at the same time to impact on sexual health promotion. University health educators and staff at student health centers could play an active role in educational campaigns. *Clin Ter 2019; 170(4):e278-284. doi: 10.7417/CT.2019.2148*

Key words: sexual behaviours, young adults, condom use, risk perception, university

Introduction

Sexually transmitted infections (STIs) account for some of the most serious public health problems worldwide, especially among adolescents. Multiple health risk behaviours have been identified as a problem during early adulthood (Asamoah & Agardh, 2017; Folch et al., 2015; Benotsch et al., 2013; Calafat et al., 2013; Stulhofer & Ajdukovic, 2013; Norton et al., 2012; Danielsson et al., 2012; Yu, 2012; Bajos et al., 2010; Arnett, 2007), especially among university students, an exceptionally high risk category for sexual behavior and reproductive health (García et al., 2016; Chanakira et al., 2015; Fromme et al., 2008; Keller et al.,

2008). In fact, going to university usually coincides with becoming more open-minded and liberal about sex (Chacón López et al., 2016; Yu, 2010; Angelin et al., 2015; Degroote et al., 2014; Lefkowitz, 2005); thus, sexual activities and the number of partners increase alongside new experiences, such as cohabitation, and different frameworks of social norms (Shaik & Deschamps, 2006).

Even if condom use is considered one of the most effective behavioural strategies for reducing the risk of STIs and HIV (human-immunodeficiency-virus) infection (Flannery & Ellingson, 2003; Marelich & Clark, 2004), surveys have revealed that condoms were difficult to use for the sexually inexperienced, and detracted from sexual pleasure, suggesting that their use was embarrassing (Stenhammar et al., 2015; Lally et al., 2014; Lam et al., 2004). Condoms have also been reported as being used primarily as protection against pregnancy, and their use becomes irregular when other contraceptives are used (Zellner et al. 2015; Lazarus et al., 2009). According to some researchers, the failure to use condoms is associated with an increased likelihood of HIV testing (Trieu, Bratton & Marshak, 2011; Opt & Loffredo, 2004). Currently, it is taken for granted that “risk perception” plays a crucial role when individuals decide whether to engage in risky sexual behaviours. Especially among upper-middle class young people, who prioritize professional and career goals, unwanted pregnancies or STI diagnose could have a major impact on life plans (Cheney et al., 2014). Thus, risk perception for unwanted pregnancies and STI can be considered a “portfolio” of lifestyle risks that individuals are responsible for managing.

The risk perception is also connected to the “optimistic bias”, a very well supported fallacy of human thinking that describes the observation that people tend to assess their own risk of falling victim to an adverse event as lower than the risk of others to experience that selfsame event. The term was coined by Weinstein in 1980. The phenomenon has also been called, unrealistic optimism, comparative optimism and a number of other labels, including the illusion of unique invulnerability (Perloff 1987). Beyond the field of health, optimistic bias was applied to the risk of various accidents including those experienced in bungee jumping (Middleton

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et al., 1996), extreme sports (Willig, 2008), traffic (McKenna, 1993), food consumption (Miles & Scaife, 2003), body image (Chock, 2011), college performance (Ruthig et al., 2007) or future life events (Klaczynski & Fauth, 1996; Weinstein, 1980). The existence of the phenomenon is not dependent on gender, age and a number of other demographic variables (Kos & Clark 2001; Weinstein et al. 1986) and it tends to be higher for events one can perceive as controllable (getting skin cancer and having a car accident as the driver) than for those that appear as uncontrollable (having an accident as a passenger and needing a hearing aid) (Kos & Clark 2001). The optimistic bias is also related to condom use (Thompson et al., 1996; Chapin, 2010) where appears that many college students feel protected from HIV because they judge their current sexual environment to be safe due to monogamy, sexual history taking, and the ability to tell a partner's HIV status. The practical importance of optimistic bias derives from the assumption that it makes people choose risky behaviors and avoid, in the area of health, protective and preventive activity, and, in this vein, can be considered a major obstacle to attempts at improving public health or reduce the risk or mitigate the consequences of accidents.

The aim of this study is to examine the condom use and its determinants among young adult in Italy. The hypothesis is that individuals' demographic characteristics (gender, faculty, to have a committed partner, to be resident) and the risk perception may play a role in condom use.

Method

The total population under investigation consisted of students attending Sapienza University of Rome (in the academic year 2014-2015). The investigation was approved by the Student Affairs Office of the University. The questionnaire was validated involving 127 University students, and the sample was homogenous for age and gender, and gave a value of Cronbach's alpha of 0.720.

The anonymous online questionnaire was forwarded to all students registered in the University Student Information System (Infostud). The web survey was conducted from January to April 2015.

To collect the most important information on past and present sexual activities, we used the Behavioral Risk Factor Surveillance System (BRFSS) from the Centers for Disease Control and Prevention (<http://www.cdc.gov/brfss/>). For the perception of risk measures, we used a five-point Likert scale of Donizzetti (2009), an Italian scale used to examine perceptions of risk in young people.

The sample size was calculated using EpiInfo 7.0 and chosen on the following parameters:

- University students population: 103.354
- Expected frequency of non condom use: 23% (Carducci et al 2004)
- Confidence limit: 5%;
- Confidence level: 99%.
- On the basis of the above parameters, the total sample to recruit was 4680 students.

The variables were recoded in IBM SPSS Statistics (ver. 22), and descriptive and statistical analyses were conducted using tables, graphs and chi-square-test. Likert scale respon-

ses were merged into 3-point scale for easier presentation of the data.

Results

Table 1 describes the demographic characteristics of the students enrolled. Females account for almost 60% (n. 2,753) of the participants. Most representative age group ranging from 21 to 24 years (n. 2,206; 47.5%). Percentage of resident students is slightly higher than the others: 56.2% (n. 2,611) Vs 43.8% (n. 2,037). The most representative group of faculties are scientific ones (n. 1,780; 38.3%) followed by technical (n. 1,489; 32.0%), liberal art (n. 1,318; 28.4%); for 61 students the faculty is unknown. Only 173 (3.7%) students declared to have not had a sexual intercourse and 71,0% (n. 3,300) of them has a committed partner. Frequencies of condom use were the following: never (n. 1,105; 23.8%), sometimes (n. 927; 19.9%), often (n. 963; 20.7%) and always (n. 1,653; 35,6%).

Although several variables emerged as significant correlates of risky sexual behaviours in this study, we focused on the condom use and its determinants among young adult. For this purpose condom use was cross-referenced with individuals' demographic characteristics (gender, faculty, to have a committed partner, to be resident) and the risk perception. In table 2 is evaluated the frequency of condom use related to the magnitude of risk perception of certain

Table 1. Demographic and social characteristics of the participants enrolled

Demographic and social characteristics	N.	%
Sex		
Males	1,895	40.8
Females	2,753	59.2
Age		
≤20	1,308	28.1
21-24	2,206	47.5
≥25	1,134	24.4
Resident		
Yes	2,611	56,2
No	2,037	43,8
Faculty		
Med-science	1,780	38.3
Technical	1,489	32,0
Liberal art	1,318	28,4
Unknown	61	1,3
Have had a sexual intercourse		
Yes	4,475	96,3
No	173	3,7
Committed partner		
Yes	3,300	71,0
No	1,348	29,0
Frequency of condom use		
Never	1,105	23,8
Sometimes	927	19,9
Often	963	20,7
Always	1,653	35,6
Total	4,648	100

Table 2. Condom use, risk perception and gender.

Risk perception	Total		Condom use							
			Never		Sometimes		Often		Always	
	N.	%	N.	%	N.	%	N.	%	N.	%
Unintended pregnancies			p<0.001							
Low	2,013	100	534	26.5	316	15.7	347	17.2	816	40.5
Medium	2,189	100	428	19.6	470	21.5	538	24.6	753	34.4
High	446	100	143	32.1	141	31.6	78	17.5	84	18.8
Herpes/Candida			p<0.001							
Low	2,027	100	492	24.3	331	16.3	380	18.7	824	40.7
Medium	2,129	100	487	22.9	452	21.2	480	22.5	710	33.3
High	492	100	126	25.6	144	29.3	103	20.9	119	24.2
HPV			p<0.001							
Low	2,969	100	703	23.7	531	17.9	584	19.7	1,151	38.8
Medium	1,419	100	329	23.2	325	22.9	324	22.8	441	31.1
High	260	100	73	28.1	71	27.3	55	21.2	61	23.5
HIV			p<0.001							
Low	3,621	100	876	24.2	665	18.4	729	20.1	1,351	37.3
Medium	841	100	187	22.2	217	25.8	198	23.5	239	28.4
High	186	100	42	22.6	45	24.2	36	19.4	63	33.9
Gonorrhoea			p<0.001							
Low	3,567	100	867	24.3	649	18.2	736	20.6	1,315	36.9
Medium	951	100	200	21.0	254	26.7	202	21.2	295	31.0
High	130	100	38	29.2	24	18.5	25	19.2	43	33.1
Pox			p<0.001							
Low	3,652	100	888	24.3	681	18.6	744	20.4	1,339	36.7
Medium	875	100	184	21.0	222	25.4	195	22.3	274	31.3
High	121	100	33	27.3	24	19.8	24	19.8	40	33.1
Gender			p=0.078							
Female	2,753	100	682	24.8	564	20.5	559	20.3	948	34.4
Male	1,895	100	423	22.3	363	19.2	404	21.3	705	37.2
Committed partner			p=0.368							
Yes		100	785	23.8	679	20.6	678	20.5		35.1
No	3,300,348	100	320	23.7	248	18.4	285	21.1	1,158,495	36.7
Age			P=0.030							
≤20	1,308	100	294	22.5	276	21.1	270	20.6	468	35.8
21-24	2,206	100	501	22.7	455	20.6	456	20.7	794	36.0
≥25	1,134	100	310	27.3	196	17.3	237	20.9	391	34.5
Resident			p=0.225							
Yes	2,611	100	649	24.9	522	20.0	527	20.2	913	35.0
No	2,037	100	456	22.4	405	19.9	436	21.4	740	36.3
Faculty			p=0.105							
Med-science	1,780	100	434	24.4	341	19.2	396	22.2	609	34.2
Technical	1,489	100	326	21.9	294	19.7	301	20.2	568	38.1
Liberal art	1,318	100	329	25.0	283	21.5	252	19.1	454	34.4
Unknown	61	100	16	26.2	9	14.8	14	23.0	22	36.1
TOTAL	4,648	100	1,105	23.8	927	19.9	963	20.7	1,653	35.6

STIs and in relation to demographic characteristics. All the STI risks perception are statistically significant associated with frequency of condom use ($p<0.001$). *Always* condom use frequency is higher among the group that has a *low* risk perception of unintended pregnancy (n. 816; 40.5%) than the *medium* ones (n. 753; 34.4%) and the *high* ones (n. 84; 18.8%). Similar trend is observed for Herpes/candida [*low* (n. 824; 40.7%); *medium* (n. 710; 33.3%) and *high* (n. 119;

24.2%)] and HPV [*low* (n. 1,151; 38.8%); *medium* (n. 441; 31.1%) and *high* (n. 61; 23.5%)]. Also for students with a *low* risk perception of HIV we observe an higher proportion of people that *always* use condom (n. 1,351; 37.3%) respect groups with higher risk perception [*medium* (n. 239; 28.4%) and *high* (n. 63; 33.9%)] but the trend disappeared. Similar results are observed for gonorrhoea [*low* (n. 1,315; 36.9%); *medium* (n. 295; 31.0%) and *high* (n. 43; 33.1%)] and pox

[low (n. 1,339; 36.7%); medium (n. 274; 31.3%) and high (n. 40; 33.1%)]. Frequency of condom use is not statistically significant associated with the following demographic characteristics: gender, faculty, to have a committed partner, to be resident. Association with age groups is observed ($p=0.030$) and in the group of age ≥ 25 years the proportion of students who *never* use condom (n. 310; 27.3%) is higher than in the other age groups [≤ 20 years (n. 294; 22.5%); 21-24 years (n. 501; 22.7%)]

Discussion

The results indicated that only a third of the sample (35%) used condoms regularly, and no significant differences emerged according to gender, while some emerged according to age. This finding confirms that some misconceptions about condom use have not been totally debunked among young people (Stenhammar et al., 2015; Uribe Alvarado et al., 2012), particularly those referring to either birth control and protection against STIs (Zak-Place & Stern, 2004). The results demonstrated that Italian university students' risk perceptions for sexual health is low or medium, and while females are more worried about unwanted pregnancies, males perceive a higher risk for HIV infection (although the statements concerning condom use contradict this risk perception). The data confirm that, although risky sexual behaviour results in increased perception of vulnerability, this increased perception of risk does not result in safer sexual behaviour (Collado, Loya & Yi, 2015). As reported in the scientific literature (Mogilevkina, Tydén & Odlin, 2010; Signorelli et al., 2006), lower risk perception is associated with riskier sexual practices, and it is more widespread among young males (Bergamini et al., 2013). In addition this finding was confirmed by students' statements concerning condom use. Furthermore the data confirm that women did not take the initiative in discussing condom use with their partner, likely because they felt *embarrassed* or because they feared being labelled with the gender stereotype of the promiscuous female, as reported in literature (East, Jackson, O'Brien & Peters, 2011; Gavey, McPhillips & Doherty, 2001).

Almost all students surveyed engaged in sexual intercourse, 71% with a committed partner and 29% with an occasional partner. Having a stable and trustworthy partner is considered a form of security itself, providing protection against the possible risks associated with sexual behaviour, i.e., *relationship security*, *viral protection* (Rhodes & Cusick, 2000). Certainly, a stable partner plays a significant role in the relationship between risk and trust, and may be a reason for reduced condom use. In fact, many people tend to view condoms as more important in casual sexual encounters than in monogamous and stable relationships (Zanella Delatorre & Garcia Dias, 2015). Romantic love and feelings of "trust" in a partner are often used to justify sex without a condom (Fishbein & Ajzen, 2010).

Little is known about how cultural capital intersects with the social and cultural milieu to shape perceptions of sexual risk and sexual practices (Bourdieu & Passeron, 1977), and this study highlights that the frequency of condom use is not statistically significant associated with the *sexual health knowledge* that could arise as a result of direct personal ex-

perience (the university programme attended) (Vogtmann et al., 2011) or as a result to be a resident student (considering that residential students are more connected to local social networks and thus have more opportunities for direct communication with doctors and relatives about topics related to sexuality).

Conclusions

Young people do not always have the information they need, and further research is needed to determine the factors contributing to effective communication of sexual health information to young people. In general, sexual health education initiatives targeting young people at an early stage of sexual experience (in this case university students) should concentrate on promoting self-efficacy and removing barriers (whether mental or practical) that tend to interfere with the correct and regular use of condoms (Tung, Cook & Lu, 2012). It is also important to underline that the university environment plays a role in shaping sexual health behaviours because it can offer 'cues to action' and different social norms for sexual health behaviours (Marelich & Clark, 2004). Young adults in a campus setting are embedded in a "hook-up" culture (Bogle, 2008; Owen, Rhoades, Stanley & Finchman, 2010), with overlapping sexual partners (Grello, Welsh & Harper, 2006). University health educators and staff at student health centres could play an active role in campaigns to help young adults, both men and women, recognize that STIs contribute to a poor quality of life and can interfere with life plans (Downing-Matibag & Geisinger, 2009).

The results of this study suggested that future sexual health education campaigns should be aimed at improving negotiation self-efficacy with partners regarding condom use, improving sexual health knowledge, supporting preventative experiences such as screening or tests and debunking the dangerous idea that a stable partner could serve as viral protection. Furthermore, considering that risk perception is at medium/low levels among students as a whole and that, compared to males, females are more sensitive to sexual health risks, future sexual health campaigns should target young females given their greater sensitivity (Renzi, Zantedeschi, Signorelli & Osborn, 2001). Universities have an opportunity to access young people and focus on sexual health promotion, and university health educators and staff at student health centres could play an active role in educational campaigns, using informal services and a young staff (Jerome et al., 2009).

Limitations

This study is not without limitations. The results must be interpreted as reported rather than as representative of actual behaviours. Previous research indicates that sexual behaviour is subject to considerations of social acceptability, bias and memory. This caveat is especially relevant in the case of condom use, which is often subject to considerations of social acceptability. Despite the obvious risks, an online survey was chosen because it allows for anonymity and self-administration, a useful strategy in the case of sensitive

topics such as sexual behaviours. An online survey potentially decreases the need to respond in a socially acceptable way. To improve the representative quality of the sample, we used the filter of the Student Information System of the University, which only students at the university can access. Participants came from a single university and, although the overall sample size was large, the response rate was only a percentage of the total university population. This response rate, therefore, makes it difficult to generalize the results to the larger “university population” and places limitations on the wider applicability of the study.

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