



ELSEVIER

Contents lists available at ScienceDirect

Social Science &amp; Medicine

journal homepage: [www.elsevier.com/locate/socscimed](http://www.elsevier.com/locate/socscimed)

## Short report

# Understanding the association between condom use at first and most recent sexual intercourse: An assessment of normative, calculative, and habitual explanations<sup>☆</sup>

Aleksandar Štulhofer<sup>a,\*</sup>, Valerio Baćak<sup>a</sup>, Dea Ajduković<sup>b</sup>, Cynthia Graham<sup>c</sup><sup>a</sup> Faculty of Humanities and Social Sciences, University of Zagreb, Sex Research Unit, Department of Sociology, Ivana Lucica 3, 10000 Zagreb, Croatia<sup>b</sup> Vuk Vrhovac University Clinic for Diabetes, Endocrinology and Metabolic Diseases, University of Zagreb, Croatia<sup>c</sup> Oxford Doctoral Course in Clinical Psychology, Isis Education Centre, Warneford Hospital, and Harris Manchester College, University of Oxford, United Kingdom

## ARTICLE INFO

## Article history:

Available online xxx

## Keywords:

Consistent condom use

Habit

Male condoms

Croatia

Sexual health

## ABSTRACT

The aim of this study was to provide a better understanding of the likely mechanisms underlying regular condom use. In 2009, 1145 sexually active individuals aged 18–65 years were surveyed online, after being recruited via an e-mail message circulated at a large Croatian university and posted on various social networking websites. Participants' mean age was 28.1 years (SD = 8.01). Women constituted a slight majority of the sample (51.6%). The research questions – whether the frequently observed association between condom use at first and most recent sexual intercourse could be best predicted by (a) norm-oriented behavior; (b) calculative decision-making; or (c) habit formation – were tested using multiple logistic regression. Only the calculative and habitual motivational determinants of condom use were significant predictors. Unlike calculative use, which decreased the odds of condoms being used at both occasions, habitual use, as expected, increased the odds of condom use. In addition, the habitual modality of condom use significantly predicted consistent condom use with both casual and steady sexual partners. Age, being in a relationship, and the number of lifetime sexual partners were negatively associated with habitual condom use. The finding that habit plays a substantial role in consistent condom use suggests the need for further exploration of personality and relational factors associated with the initiation of habitual condom use.

© 2010 Published by Elsevier Ltd.

## Introduction

Consistent condom use is of central importance for sexual and reproductive health (Sheeran, Abraham, & Orbell, 1999; UNAIDS, 2009). Exposure to sexual health risks has been well documented and a global rise in STIs and HIV prevalence seems to be particularly evident among individuals under the age of 25 (Inciardi & Williams, 2005). Although there is evidence of increased use of male condoms among young people (Santelli, Lindberg, Finer, & Singh, 2007; Santelli, Morrow, Anderson, & Lindberg, 2006), many sexually active individuals do not use condoms on a consistent basis (Hatherall, Stone, Ingham, & McEachran, 2005; Manderson, Tye, & Rajanayagam, 2005; Measor, 2006). Similar

findings were recently reported in Croatia (Štulhofer, Ajduković, Božičević, & Kufrin, 2006; Štulhofer, Graham, Božičević, Kufrin, & Ajduković, 2007).

Condom use at first sexual intercourse is a good predictor of condom use at most recent intercourse (Hiršl-Hećej & Štulhofer, 2001; Shafii, Stovel, Davis, & Holmes, 2004; Shafii, Stovel, & Holmes, 2007). Several authors have suggested a possible role for habit formation in this association, but alternative causal mechanisms have seldom been considered (Ku, Sonenstein, & Pleck, 1992; Shafii et al., 2004; Yzer, Siero, & Buunk, 2001). Moreover, although “habit formation” seems to be the favored hypothesis, it has not been empirically tested (Hiršl-Hećej & Štulhofer, 2001; Shafii et al., 2007; Sheeran et al., 1999). To the best of our knowledge, the mechanisms responsible for the association between condom use at first intercourse and current condom use have not been systematically investigated.

There are at least three possible explanations for the observed association between condom use at first and most recent intercourse. The first, the “normative hypothesis,” suggests that regular condom users can be distinguished from their peers by their strong

<sup>☆</sup> This study was a part of the research project Behavioral HIV Surveillance funded by the Croatian Ministry of Science, Education, and Sports. The authors would like to thank Željko Raukar for his assistance with data collection and Ivan Landriep for his comments on an earlier version of this paper.

\* Corresponding author. Tel.: +38516120170.

E-mail address: [astulhof@ffzg.hr](mailto:astulhof@ffzg.hr) (A. Štulhofer).

adherence to social norms that reflect expectations that sex would (and should) not take place without the use of a condom (Breakwell, Millward, & Fife-Schaw, 1994; Sheeran et al., 1999). A second possibility (the “calculative hypothesis”) is that condom use is governed by (quasi) rational decision-making. A complex, highly subjective, and contextual calculation of costs and benefits of using a condom is said to determine whether or not condoms are used (Fisher, Williams, Fisher, & Malloy, 1999). Finally, the “habit formation hypothesis” argues that regular condom use does not depend on positive norms, risk calculations, or communication skills, but is a habit that develops early on (for various reasons, e.g., a strong fear of unwanted pregnancy) and is sustained by the force of non-deliberation.

This study explored whether the association between the use of the male condom at first and most recent sexual intercourse could be best predicted by three modalities or motivational determinants: (a) norm-oriented behavior; (b) calculative decision-making; or (c) habit formation. We expected the habitual modality to increase and the normative and calculative modalities to decrease the odds of regular condom use. Using a sample of 1145 sexually active individuals aged 18–65 years surveyed online in 2009, we tested these hypotheses with the aim of increasing understanding of the likely mechanisms underlying consistent condom use.

## Method

### Recruitment procedure

Participants were solicited via an e-mail message distributed among students at the University of Zagreb and posted on Facebook and several electronic forums and mailing lists. In addition, the study was advertised on a popular dating website (>80,000 registered users) by placing a web banner with a brief study description. The e-mail message provided information about the study aims (to investigate the patterns of condom use) and invited individuals who were 18 years and over to follow a link to an Internet-based questionnaire. On the first screen, individuals were asked to consent to participate in a study on condom use before beginning questionnaire completion. All the procedures were approved by the University of Zagreb Faculty of Humanities and Social Sciences Ethical Review Board.

### Participants and data collection

During two weeks in April and May 2009, nearly 1900 individuals accessed the online questionnaire. Exclusion of participants older than 65, those who had never had sexual intercourse, and those whose questionnaires contained 10% or more missing data reduced the sample to 1145 participants (mean age = 28.1; SD = 8.01; range 18–65 years). Less than half of the participants (45%) reported being students and 51.6% were women. The mean age of coitarche was 17.8 (SD = 2.08) for men and 18.2 (SD = 2.90) for women. As expected, men reported a higher number of lifetime sexual partners (median = 10) than women (median = 5). Just under a third of participants were single (30.3%), almost half were married (48.6%), and the remainder (21.1%) were in a relationship.

There were several significant differences between the student ( $n = 560$ ) and non-student ( $n = 585$ ) subsamples. Students were more than five years younger ( $p < .001$ ), had fewer lifetime sexual partners ( $p < .001$ ), and reported more frequent condom use with steady partners ( $p < .001$ ), than non-students. In addition, the student subsample contained a larger proportion of women than the non-student sample ( $p < .001$ ).

## Measures

The questionnaire contained 73 variables organized into three sections: (a) sociodemographic data, (b) sexual behavior, and (c) reasons for condom use, communication about condom use, and experiences of condom-related problems. All measures in the final section were developed specifically for this study. The questionnaire was pre-tested on 12 students for comprehensibility; on average, completion took approximately 15 min.

### The following measures were used

*Condom use* was assessed with four questions. Participants were asked whether they had used a condom: a) the first time they had sexual intercourse (yes/no) and b) at most recent sexual intercourse (yes/no). Two questions assessed *frequency of condom use*: “In the last month, how often did you use condoms with a steady partner?” and “In the last six months, how often did you use condoms with casual partners?” Responses were made on a 6-point scale (from 1 = never to 5 = always/every time; 6 = did not have a steady/casual partner in that period). If a condom was used during every occasion of sexual intercourse, this was coded as consistent condom use.

*Lifetime number of sexual partners* was assessed with the following question: “How many sexual partners have you had? By sexual partner we mean a person with whom you had oral, vaginal, or anal sex.” In multivariate analyses, this indicator was dichotomized into 0 = 1–6 (the median) and 1 (7 or more partners).

*Reasons for condom use* or motivational determinants were assessed with three scales: the *Norm-Oriented Condom Use Scale* (4 items, e.g., My friends' opinions influence my condom use), the *Calculative Condom Use Scale* (5 items, e.g., I use condoms only when I see good reasons for it), and the *Habitual Condom Use Scale* (6 items, e.g., I developed a habit of using condoms); for the complete list of items for the three scales, see Appendix. Answers were anchored using a 5-point Likert-type scale ranging from 1 = not at all like me to 5 = very much like me.

These composite measures were developed using exploratory principal component analysis (PCA) of a pool of 42 items, which was compiled by reviewing literature on condom use. Three components with eigenvalues  $> 1$  were extracted and then rotated to an orthogonal position using the varimax procedure. Only the non-redundant items with factor loadings  $> .40$  were used for scale construction (factor loadings may be obtained from the authors). The Calculative and the Habitual Use scales had good internal consistency (Cronbach's  $\alpha = .83$  and  $.85$ , respectively). Reliability of the Normative Condom Use scale, the shortest of the three, was acceptable (Cronbach's  $\alpha = .64$ ). Correlations between the three composite measures were in the expected direction. Habitual and calculative use were strongly and negatively associated ( $r = -.49$ ,  $p < .001$ ), whereas the correlation between normative and calculative use was positive and moderate in size ( $r = .35$ ,  $p < .001$ ).

### Statistical analyses

Composites of norm-oriented, calculative, and habitual use of condoms were created by summing the responses to items in the scale. Multiple logistic regression analysis assessed associations between condom use and the three scale constructs, while controlling for moderating effects of age, gender, and relationship status. All analyses were carried out using SPSS 16 statistical software.

## Results

To validate the use of the three motivational composites in the various subgroups, exploratory PCA using varimax rotation was carried out separately by gender, age (younger vs. older ( $\geq 31$  years)),

**Table 1**

Habitual, calculative, and normative condom use by gender, age, and relationship status.

		Habitual use			Calculative use			Normative use		
		n	M	SD	n	M	SD	n	M	SD
Gender	Female	578	17.78	7.12	579	13.54	5.60	579	5.79	2.15
	Male	531	16.88	7.04	541	14.50	5.93	542	6.67	2.81
Age	<31	807	17.85	7.05	815	13.33	5.64	811	5.98	2.48
	≥31	302	16.02	7.04	305	15.81	5.77	310	6.83	2.55
Relationship status	Single	538	17.98	6.97	546	15.81	5.77	310	6.83	2.55
	Married/in a relationship	571	16.76	7.17	574	14.71	5.96	579	6.54	2.65

<sup>a</sup>Median age in the sample.

and use of condom at most recent sexual intercourse (yes/no) for all 15 items (analyses not presented here). The original three-component structure, characterized by four items loading on the normative, five on the calculative, and six on the habitual dimensions, remained consistent across the groups differentiated by gender, age, and recent condom use. Average scores on the three motivations by gender, age and relationship status are presented in Table 1.

Since participants who were married or in a relationship were significantly older than those who were single ( $t = -3.89$ ,  $df = 765.85$ ,  $p < .001$ ), we used multiple regression to distinguish between the effects of age and relationship status (results not shown here). Controlling for age, the association between relationship status and habitual and normative condom use remained statistically significant ( $\beta = -.06$ ,  $p < .05$  and  $\beta = -.08$ ,  $p < .01$ , respectively).

In the next step, a logistic regression model was built to confirm the association between condom use at first and most recent sexual intercourse (not presented here). As expected, having used condoms at Coitarche significantly increased the odds of condom use at most recent sexual intercourse ( $OR = 2.01$ ,  $p < .001$ ), when controlling for age, gender, and relationship status (single vs. married/in a relationship). Next, we examined how well the three motivational determinants (habitual, calculative, and norm-oriented) predicted condom use at both first and most recent intercourse. We created the dependent variable by recoding responses on condom use at first and last sexual intercourse into a single variable. Participants who reported using a condom on both occasions were coded 1 ( $n = 308$ ; 26.9%) and the remaining participants ( $n = 837$ ; 73.1%) were coded 0. Due to positive skewed distribution of all three motivational scales, logistic regression analyses were carried out on both log-transformed and raw data. As the results were almost identical, we present only the findings from the non-transformed analyses.

Controlling for age, gender, and relationship status, only two of the three motivational determinants were significantly associated with condom use. Higher scores on the Habitual Condom Use Scale increased, while higher scores on the Calculative Condom Use Scale decreased, the odds of condoms being used at first and most recent

**Table 2**

Correlates of condom use at first and most recent sexual intercourse.

	Condom use at first and most recent sexual intercourse ( $n = 1065$ )	
	OR	95% CI
Age	.91*	.88–.94
Gender (referent = female)	1.40	.99–1.99
Married/in a relationship (referent = single)	.83	.59–1.18
Habitual condom use	1.13*	1.10–1.16
Calculative condom use	.89*	.85–.92
Normative condom use	.96	.89–1.04

\* $p < .001$ .

intercourse (see Table 2). The odds increased by 13% with each additional point on the Habitual Condom Use Scale and decreased by 11% with each point on the Calculative Condom Use Scale. Age was negatively associated with the odds of condom use at first and most recent intercourse.

Two multiple logistic regression models further examined if habitual use was a predictor of consistent condom use with casual and steady partners. In addition to age, gender, and relationship status, indicators of lifetime number of sexual partners and frequency of sex in the last month were also included in the models. As Table 3 shows, habitual use significantly predicted consistent condom use with both types of partners. The odds of using condoms consistently with casual partners increased by 21% with each additional point on the Habitual Scale. The odds of consistent condom use in a steady relationship were increased by a similar magnitude (26%). Interestingly, a larger number of lifetime partners was negatively associated with the probability of consistent condom use with a steady partner.

The final regression model (not presented in tables), with age, gender, relationship status, and lifetime number of sexual partners entered as independent variables explored predictors of habitual use. Age ( $\beta = -.09$ ,  $p < .001$ ), being in a relationship ( $\beta = -.08$ ,  $p < .01$ ), and a higher than median number of lifetime partners ( $\beta = -.08$ ,  $p < .05$ ) were negatively associated with habitual use.

## Discussion

We tested three possible explanations for the frequently reported association between condom use at first and most recent sexual intercourse: norm-oriented behavior, calculative decision-making, and habit formation. Our findings suggest that a routine, non-deliberate behavior regulated by habit is the best predictor of regular condom use.

A conceptualization of consistent condom use as a matter of habit entails two important questions: how does this habit form

**Table 3**

Odds ratios (95% CI) for correlates of consistent condom use with casual and steady partners.

	Consistent condom use with casual partners (last six months) ( $n = 597$ )	Consistent condom use with a steady partner (last month) ( $n = 1070$ )
Age	.99 (.96–1.01)	.95* (.92–.98)
Gender (referent = female)	1.42 (.96–2.12)	1.35 (.95–1.94)
Married/in a relationship (referent = single)	1.33 (.85–2.07)	1.03 (.68–1.55)
No. of sexual partners (referent = median (6) or below)	.81 (.52–1.25)	.45** (.30–.68)
Frequency of sex	1.00 (.97–1.04)	.98 (.95–1.01)
Habitual condom use	1.21** (1.17–1.25)	1.26** (1.22–1.30)

\* $p < .01$ ; \*\* $p < .001$ .



and why do certain individuals develop the habit, while others do not? The first of the two questions focuses on a black box “explanation” of habit initiation. It is possible that the development of the condom use habit is related to risk aversion, expressed in a particularly strong fear of pregnancy or STI infection. For example, an experience of STI infection could initiate the development of the condom “habit” in a person for whom such experience was traumatic (Manderson et al., 2005).

Younger participants, those not in relationships, and those with fewer numbers of lifetime sexual partners were more likely to use condoms habitually. The effect of age is most likely a reflection of the well-documented global increase in condom use among young people (Santelli et al., 2007, 2006). The finding that single participants had higher scores on the Habitual Condom Use Scale than those who were married or in a relationship highlights the fact that the process of consolidation of a romantic relationship is often marked by the transition from the use of condoms to the use of other contraceptive methods (Macaluso, Demand, Artz, & Hook, 2000). The fact that individuals who reported fewer lifetime sexual partners were more likely to use condoms habitually may suggest that a third variable partly explains the association between condom use at first and most recent intercourse. For example, individual differences related to sexual sensation-seeking or conscientiousness may be predictive of whether a condom is used during first (and later) intercourse (Arnett, 1996; Benotsch, Kauth, Corrigan, & Johnson, 1998; Hoyle, Fejfar, & Miller, 2000; Trobst, Herbst, Masters, & Costa, 2002).

Social context should not be overlooked when investigating habitual condom use. The development of other habitual health-related behaviors has been associated with socioeconomic status (Lindbladh & Lyttkens, 2002). It is likely that financial resources (access to condoms) and education (learning about the need for condom use) increase the likelihood of habit formation, particularly among “risk-avoidant” individuals.

An additional unanswered question is: what happens if the habit of using condoms is “broken” (e.g., related to changes in a relationship (from casual to committed), or to relationship breakup)? For example, would an individual who was in the habit of using condoms in a previous relationship need less time to (re-) establish this pattern of behavior in a new relationship? Clearly, a better understanding of the factors that initiate and drive the process of condom use habit formation is needed.

We should acknowledge some limitations of our study. Although fairly large and demographically diverse, the non-probabilistic nature of the sample suggests caution in making generalizations. The low reliability of the Normative Scale suggests that this composite measure should be improved, although the low internal consistency may reflect the fact that there are multiple sources of normative influences on condom use (e.g., partners, parents, peers, media, sex education, etc.). Another important limitation was that we did not systematically assess the role of the partner in reported condom use. Clearly condom use is a dyadic behavior, although there have been relatively few attempts to integrate intrapersonal and relationship factors with individual-level factors in understanding an individual's decision to use condoms (Harvey et al., 2006).

Despite the above limitations, we believe that our findings contribute to a greater understanding of the mechanisms underlying consistent condom use. In contrast to the existing individual-level models of safer sex that anchor the promotion of responsible sexual behavior to rational decision-making, consistent condom use may be best explained by habit. In fact, participants who scored higher on the Calculative Scale (reflecting condom use for cost-benefit reasons) were less likely to have used a condom at both first and most recent intercourse.

There are practical implications of such a “non-deliberative” model of condom use, particularly for sex education and STI/HIV prevention programs. Our findings support the recent recommendation that these programs should be introduced before the onset of sexual activity (UNESCO, 2009). Using condoms from the beginning of one's sexual life may increase the odds of habit formation. To facilitate the routine use of condoms, educational and preventive programs need to focus on the development of habitual condom use. Although habitual condom use does not represent a realistic goal for all sexually active young people, efforts to encourage the formation of such a habit are fully compatible with the need for a flexible and culturally sensitive approach to STI/HIV prevention.

#### Appendix. Items from the habitual, calculative, and normative condom use scales

<i>Habitual condom use</i>	I have developed a habit of using condoms Condom use is for me a standard part of lovemaking I do not think about using a condom, I just use it Condom use is not something I negotiate about – for me, sex without a condom is simply unacceptable If I did not use a condom, I would feel awkward It would be impossible to talk me into having sex without using a condom
<i>Calculative condom use</i>	I don't use condoms automatically, without first assessing the risks Whether I would use a condom or not depends on what I know about a partner I do not use a condom without first assessing the need to use it in a particular situation I use condoms only when I see good reasons for it I do not use condoms with sexual partners whose behavior I do not consider risky
<i>Normative condom use</i>	My friends' opinion influences my condom use I do not use condoms because it would mean that I do not trust my partner I use condoms because everybody else is using them I do not use condoms because my religion objects to it

#### References

- Arnett, J. J. (1996). Sensation seeking, aggressiveness, and adolescent reckless behavior. *Personality and Individual Differences*, 20, 693–702.
- Benotsch, E. G., Kauth, M. R., Corrigan, S. A., & Johnson, J. E. (1998). Personality and health-related behavior in HIV seropositive men. Paper presented at the 106th Annual Meeting of the American Psychological Association, San Francisco.
- Breakwell, G., Millward, L., & Fife-Schaw, C. (1994). Commitment to “safer sex” as a predictor of condom use among 16–20-year-olds. *Journal of Applied Social Psychology*, 24, 189–217.
- Fisher, W. A., Williams, S. S., Fisher, J. D., & Malloy, T. E. (1999). Understanding AIDS risk behavior among sexually active urban adolescents: an empirical test of the Information–Motivation–Behavioral Skills Model. *AIDS and Behavior*, 3, 13–23.
- Harvey, S. M., Beckman, L. J., Gerend, M. A., Bird, S. T., Posner, S., Huszti, H. C., et al. (2006). A conceptual model of women's condom use intentions: integrating intrapersonal and relationship factors. *AIDS Care*, 18, 698–709.
- Hatherall, B., Stone, N., Ingham, R., & McEachran, J. (2005). *The choreography of condom use: How, not just if, young people use condoms*. (research report). Southampton: University of Southampton. [http://www.brook.org.uk/content/2005\\_05\\_19\\_full\\_report.pdf](http://www.brook.org.uk/content/2005_05_19_full_report.pdf). Accessed 17.06.09.
- Hiršl-Hečej, V., & Štulhofer, A. (2001). Urban adolescents and sexual risk taking. *Collegium Antropologicum*, 25, 195–212.
- Hoyle, R. H., Fejfar, M. C., & Miller, J. D. (2000). Personality and sexual risk taking: a quantitative review. *Journal of Personality*, 68, 1203–1231.
- Inciardi, J. A., & Williams, J. A. (2005). Editor's introduction: the global epidemiology of HIV and AIDS. *AIDS Care*, 17(Supplement 1), S1–S8.
- Ku, L., Sonenstein, F. L., & Pleck, J. H. (1992). Patterns of HIV risk and preventive behaviors among teenage men. *Public Health Reports*, 107, 131–138.
- Lindbladh, E., & Lyttkens, C. H. (2002). Habit versus choice: the process of decision-making in health-related behaviour. *Social Science & Medicine*, 55, 451–465.
- Macaluso, M., Demand, M. J., Artz, L. M., & Hook, E. W. (2000). Partner type and condom use. *AIDS*, 14, 537–546.

- 501 Manderson, L., Tye, L. C., & Rajanayagam, K. (2005). Condom use in heterosexual  
502 sex: a review of research, 1985–1994. In J. Catalan, L. Sherr, & B. Hedge (Eds.),  
503 *The impact of AIDS: Psychological and social aspects of HIV infection* (pp. 1–27).  
504 Amsterdam: Harwood Academic Publishers.
- 505 Measor, L. (2006). Condom use: a culture of resistance. *Sex Education, 6*, 393–402.
- 506 Santelli, J. S., Lindberg, L. D., Finer, L. B., & Singh, S. S. (2007). Explaining recent  
507 declines in adolescent pregnancy in the United States: the contribution of  
508 abstinence and improved contraceptive use. *American Journal of Public Health, 97*,  
509 150–156.
- 510 Santelli, J. S., Morrow, B., Anderson, J. E., & Lindberg, L. D. (2006). Contraceptive use  
511 and pregnancy risk among U.S. high school students, 1991–2003. *Perspectives  
512 on Sexual and Reproductive Health, 38*, 106–111.
- 513 Shafii, T., Stovel, K., Davis, R., & Holmes, K. (2004). Is condom use habit forming?:  
514 condom use at sexual debut and subsequent condom use. *Sexually Transmitted  
515 Diseases, 31*, 366–372.
- 516 Shafii, T., Stovel, K., & Holmes, K. (2007). Association between condom use at sexual  
debut and subsequent sexual trajectories: a longitudinal study using  
biomarkers. *American Journal of Public Health, 97*, 1090–1095.
- Sheeran, P., Abraham, C., & Orbell, S. (1999). Psychosocial correlates of heterosexual  
condom use: a meta-analysis. *Psychological Bulletin, 125*, 90–132.
- Štulhofer, A., Ajduković, D., Božičević, I., & Kufrin, K. (2006). *HIV/AIDS i mladi –  
Hrvatska 2005 / HIV/AIDS and youth – Croatia 2005/*. Zagreb: Ministry of Health  
and Social Care.
- Štulhofer, A., Graham, C., Božičević, I., Kufrin, K., & Ajduković, D. (2007). HIV/AIDS  
related knowledge, attitudes and sexual behaviors as predictors of condom use  
in a nationally representative sample of Croatian young adults 18–24. *Inter-  
national Family Planning Perspectives, 33*, 58–65.
- Trobst, K. K., Herbst, J. H., Masters, H. L., III, & Costa, P. T., Jr. (2002). Personality  
pathways to unsafe sex: personality, condom use, and HIV risk behaviors.  
*Journal of Research in Personality, 36*, 117–133.
- UNAIDS. (2009). Condoms and HIV prevention: position statement by UNAIDS,  
UNFPA and WHO. Retrieved from: [http://www.unaids.org/en/Knowledge  
Centre/Resources/FeatureStories/archive/2009/20090319\\_preventionposition.asp](http://www.unaids.org/en/KnowledgeCentre/Resources/FeatureStories/archive/2009/20090319_preventionposition.asp).  
Accessed 18.09.09.
- UNESCO. (2009). International technical guidance on sexuality education. Retrieved  
from: <http://unesdoc.unesco.org/images/0018/001832/183281e.pdf>. Accessed  
11.01.09.
- Yzer, M. C., Siero, F. W., & Buunk, B. P. (2001). Bringing up condom use and using  
condoms with new sexual partners: intentional or habitual? *Psychology &  
Health, 16*, 409.

517  
518  
519  
520  
521  
522  
523  
524  
525  
526  
527  
528  
529  
530  
531  
532