Condom use in Greek young adults’ dating relationships: The role of sexual debut condom use and relationship characteristics

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Abstract

We examined whether individual and relationship characteristics predicted condom use in Greek young adults’ ongoing relationships. Participants were 277 university students with ongoing dating relationships who provided their demographics and information on their sexual profiles, partners, and relationships. Participants rated their relationships in terms of matrimonial and hedonistic (passionate) characteristics, and indicated whether they had used a condom at first intercourse, at latest intercourse, and consistently during the relationship. Condoms were more likely to be used at first intercourse, at latest intercourse and during the relationship when they had been used at sexual debut (first-time-in-life sexual intercourse). However, they were less likely to be used at latest intercourse, the longer and the more hedonistic the relationship. In addition, increased frequency of coital sex during the relationship was associated with less consistent condom use. It appears that condom use at sexual debut establishes a resilient habit of condom use in future relationships. However, relationship duration, sexual passion, and frequency of coital sex appear to undermine condom use. Condom use promotion should address young audiences at an early age, emphasizing that relationship length, frequency of coital sex, and passion may work against protective behavior in a relationship.

Keywords: Condom use, Relationship characteristics, Sexual debut, Social psychology of health, Sexual health prevention, Greece, Young adults.

1. Introduction

Condom Use among Greek Young Adults

There are currently 13,622 people living with HIV/AIDS in Greece. Although the incidence of HIV/AIDS in Greece has been low by European standards for many years (European Centre for Disease Prevention and Control [ECDC], 2009), reports of increased HIV able infections have raised public concern (Hellenic Center for Disease Control and Prevention [HCDCP], 2011, 2012, 2013; ECDC 2011). In 2004 there were 4 reported HIV infections per 100,000 population, in 2008, 5.9; this number peaked at 10.7 in 2012 and dropped at 8.3 in 2013. By comparison, there were 6.5 cases per 100,000 population in 2004, 6.6 in 2008 and 5.8 in 2012 in
the EU and European Economic Area countries, (ECDC, 2013 latest available data).

Sexual transmission accounts for the majority (about 46%) of all cases in Greece; the largest proportion (37.4%) has been diagnosed in men who have sex with men, while 8.4% of diagnoses have been in persons who contracted HIV through heterosexual contact. It should be noted, that for 25.3% the mode of transmission remains undetermined and that for 28.8% it is Intravenous Drug Use (IDU). Of the total number of infections in 2013, 9.7% were adolescents and young adults in the age cohort of 13-24 and 16.5% in the age cohort of 25-29 years old (HCDCP, 2013), ages that roughly fall within the age-range of young adults whose sexual protective behavior is under the scrutiny of the present study.

Efforts to promote the utility of the condom in Europe have been effective at increasing condom use among young people (Bajos et al., 2010; Lazarus et al., 2009; Santelli, Sandfort, & Orr, 2009). Promotion campaigns in Greece have transformed the social representation of the condom from a disagreeable and surreptitious necessity to a broadly acceptable and openly discussed health protection product (Kordoutis, Sarafidou, & Loumakou, 2005). More importantly, condom use appears to have improved in recent decades among young adults. Lifetime experience of condom use, a gross indicator of ever having used a condom, did not exceed 64% among 20- to 24-year-olds in 1990 (Dubois-Arber & Spencer, 1998), but had increased to approximately 83% by the end of the decade (Ioannidi-Kapolou & Agrafiotis, 2005). A study that specifically focused on condom use with the most recent sexual partner of the past 12 months observed that 62% of Greek young adults used a condom at first intercourse, compared with 57% at latest intercourse (Kordoutis, Loumakou, & Sarafidou, 2000).

**Relationship and Individual Factors Associated with Condom Use**

Theory and research suggests that condom use is a decision that is influenced by the specific characteristics of the close interpersonal relationship in which it actually occurs (Noar, Zimmerman, & Atwood, 2004). Studies that adopt this relationship perspective regarding condom use behavior among adolescents and young adults tend to conceptualize relationship characteristics either as objective or as more subjective/qualitative.

Objective characteristics refer to relationship duration; frequency of sexual intercourse; length of the pre-sexual intimate relationship and acquaintance; cohabitation; asymmetry of sexual experience; and dissimilarity in terms of sociodemographic variables (“heterogamy”), such as age, race, ethnicity, and education. Research has established some associations between objective characteristics and condom use. For instance, duration (Civic, 1999; Ku, Sonenstein & Pleck, 1994; Fortenberry, Tu, Harezlak, Katz, & Orr, 2002) and frequency of coital sex (Ku et al., 1994; Katz, Fortenberry, Zimet, Blythe & Orr, 2000; Kordoutis, 2010) are both negatively associated with condom use. Heterogamy is also negatively associated with condom use with the exception of dissimilarity in education, which is positively associated with condom use (Noar et al., 2004).

Subjective/qualitative relationship characteristics refer to partners’ perceptions about the relationship, and may include basic antithetical aspects of relationships, such as the significance of the relationship to one’s life (e.g. casual vs. serious, exclusive vs. non-exclusive, main/primary vs. concurrent/secondary) and the temporality of the relationship (e.g. short-term vs. long-term, one night stand vs. date, new vs. established) (as reviewed by Noar et al., 2004). Other studies focusing on qualitative characteristics have attempted to tap the rich cognitive content of young adults’ relationships. Bauman & Berman (2005) identified three relationship types, “messing”, “boy-girlfriend” and “hubey-wifey”, respectively reflecting low, medium, and high levels of commitment, love, and trust. Condoms were used most often in the “messing” relationship type, less in the “boy-girlfriend” type, and least in the “hubey-wifey” type. Katz et al. (2000) defined relationship quality based on the saliency of partner in one’s life, emotional attachment, happi-
ness, understanding, and shared time, and observed that high-quality relationships were associated with lower condom use consistency. Civic (1999) showed that serious and committed relationships and greater levels of love were associated with decreased condom use consistency. Ahlemeyer & Ludwig (1997) have identified four types of relationships based on the prevailing communication and exchange dynamics between partners: “romantic”, characterized by sentiment; “hedonistic”, characterized by passion and pleasure; “matrimonial”, characterized by feelings of security and concern for the partner; and “utilitarian”, characterized by exchange and individualistic goals. Accordingly, condom use is expected to be most likely in utilitarian relationships, least likely in romantic and matrimonial relationships, and reasonably likely in hedonistic relationships. Recently, Kordoutis (2010) reported that matrimonial relationship characteristics were positively associated with condom use, while hedonistic relationship characteristics were negatively associated with condom use.

Although relational factors appear to be strongly associated with condom use, we cannot discount the role of individual factors in formulating an individual’s general tendency to use protection (De Visser & Smith, 1999). Past research has indicated that biological sex, age, and individual sexual profile characteristics, such as age at sexual debut (first-time-in-life sexual intercourse), condom use at sexual debut, and number of sexual partners, are also associated with condom use. Specifically, condom use decreases with older age (Abma, Martinez, Moser, & Dawson, 2004; Kelley, 2003; Ku et al., 1994; Manlove et al., 2007; Fortenberry et al., 2010). Additionally, adolescent and young women use condoms less often than age-matched men (Abma, Martinez, Moser, & Dawson, 2004; Dubois-Arber, & Spencer, 1998; Fortenberry et al., 2010; Kelley, 2003; Kordoutis et al., 2000; Lazarus et al., 2009; Manlove et al., 2007; Sheeran, Abraham, & Orbell, 1999).

Sexual debut has received a lot of attention as a decisive threshold in young people’s sexual lives. Several studies have indicated that sexual debut at a younger rather than older age is associated with a greater number of sexual partners and a higher frequency of unprotected sex later in life (Bozon, 1996; Coker et al., 1994; Sheeran, Abraham, & Orbell, 1999; Sandfort, Orr, Hirsh, & Santelli, 2008; Santelli, Sandfort, & Orr, 2008; Traeen, Lewin, & Sundet, 1992; Wellings & Bradshaw, 1994). The use of a condom at sexual debut appears to be a predictor of condom use in future sexual contacts, as it establishes a habit or a personal norm of sexual conduct at the outset of one’s sexual life (Miller, Levin, Whitaker, & Xu, 1998; Shafii, Stovel, Davis, & Holmes, 2004; Kordoutis, 2010). Individuals with a large number of sexual partners throughout life (Dubois-Arber & Spencer, 1998; Newman & Zimmerman, 2000; Sheeran et al., 1999) and those that maintain multiple concurrent partners (Kelley, 2003) tend to use condoms less frequently. Liberal attitudes toward sex and the underestimation of risks involved in sex may underlie the negative associations of number of sexual partners and number of multiple concurrent partners with condom use.

**Study Goal Empirical Expectations**

The goal of the present study is to examine how basic individual factors or characteristics and relationship ones are associated with condom use in ongoing dating relationships among Greek young adults. Relationship characteristics, such as relationship quality, relationship duration, frequency of coital sex within the relationship, concurrent partners of the past 12 months, partner’s age, and education, are more proximal to the condom use decision-making setting and more salient to the condom use decision maker. Hence, we expect that these characteristics, taken together, will be more strongly related to the decision to use a condom during the relationship and at latest intercourse. In contrast, individual characteristics, such as biological sex, age, age of sexual debut, condom use at sexual debut, and lifetime sexual partners, are more distal and less salient to the condom use decision-making setting and are not expected to be as strongly associated as relationship variables with the decision to use a condom during the relationship and at latest intercourse. In other
words, the role of individual level variables, as a whole, will weaken considerably as relationship factors are more cognitively obvious and emotionally pressing upon the decision maker of an ongoing relationship. The individual’s relational identity and concern will take precedence, within the relationship, over the personal/self identity one.

By comparison, relationship characteristics, taken together, are not expected to be associated with condom use at first intercourse because partners are less likely to have fully influenced each others’ sexual norms and practices at that point in their relationship. In contrast, we expect individual characteristics, as a whole, to be associated with condom use at first intercourse because partners bring into the relatively new relationship the values and attitudes of their close family environment, peer group and broader cultural context, specific attitudes about sex and protection, personal/self identities, dispositions, and previously acquired sexual habits and behavioral intentions.

Regarding the direction of the association between condom use and individual characteristics, we have the following expectations: men will use condoms more frequently than women and older individuals will use condoms less frequently than younger ones; a greater number of sexual partners in one’s life will be associated with less frequent condom use in present relationships; late age of sexual debut will be associated with increased condom use; and if a condom has been used in one’s sexual debut, then it is more likely that it will also be used in an individual’s present relationships.

Regarding the association between condom use and relationship characteristics, we have the following expectations: individuals will be using condoms less frequently with older partners and more frequently with partners of better education; a greater number of concurrent partners will be negatively associated with condom use; relationship length and frequent coital sex will also be associated with less frequent condom use. We expect that condoms will be used less frequently in the qualitative context of hedonistic relationships and more frequently in that of matrimonial relationships. In general, we do not expect the direction of the associations between condom use and individual or relationship characteristics to vary between first intercourse, latest intercourse, and during the relationship.

2. Methods

Participants

Three hundred undergraduate students were initially enrolled in this study from university campuses in Thessaloniki and Athens, the two major metropolitan areas of Greece. However, participants had to be involved in an ongoing dating “intimate sexual relationship” for at least one month; 23 of the enrolled participants did not meet this criterion and were removed from the analysis. The remaining 115 (41.5%) men and 162 (58.5%) women ranging in age from 18 to 25 years ($M = 21.52, SD = 1.73$) were included in the study ($N = 277$). None were married; 3% lived with their sexual partner, 32.5% lived with their parental families, 32.4% lived with a roommate, and 32.1% lived on their own.

Measures

Participants’ sexual profiles and relationships. Participants were asked about their biological sex, age, marital status, and living arrangements. They also provided some sexual profile information, such as their age at sexual debut, whether they had used a condom at their sexual debut, lifetime number of sexual partners, and number of concurrent partners during the past year. Relationship questions inquired about the biological sex, age, and education of the partner, the beginning date of the relationship, and the frequency of coital sex within it. Relationship duration was calculated by subtracting the start date of the relationship from the start date of the study. Frequency of coital sex within the relationship was measured with the following scale: 1 = less frequently than once monthly, 2 = once monthly, 3 = approximately twice monthly, 4 = approximately once weekly, 5 = approximately twice weekly, 6 = three times weekly, 7 = more than three times weekly.

Measuring relationship perception. To measure
participants’ perception of the qualitative aspects of their intimate relationship, we employed a simple measure constructed for the purposes of this study by means of a pilot study. A small number of participants (30 men and 30 women, students at the Psychology Department of the Panteion University in Athens), all involved in dating relationships, wrote words or phrases “describing the basic features of their relationship”. Analysis of the contents by two judges revealed 11 basic themes divided into two broader categories, which we labeled “hedonistic relationship type” and “matrimonial relationship type”, following a theoretical distinction in “type of relationship” made by Ahlemeyer & Ludwig (1997). The hedonistic type comprised relationship characteristics alluding to passion and pleasure, while the “matrimonial” type comprised feelings of security, trust, and care for the partner. We employed the words most frequently used by the above participants to describe the two categories in a new measure comprising eleven words, five capturing hedonistic relationships (passion, eroticism, desire, arousal, sex) and six capturing matrimonial relationships (love, romanticism, tenderness, affection, security, trust). Instructions asked participants to “first, read through the entire list of words and then, use the scale below each word to show to what extent it describes your relationship”. The scale ranged from 1 = it does not describe my relationship at all, to 7 = it describes my relationship completely. For convenience, we will refer to this measure as the Measure of Intimate Relationship Perception (MIRP).

Condom use measures. Three dependent measures tapped the basic dependent variable of our study. Participants indicated whether they had used a condom at first and latest sexual intercourse in their relationship. They also indicated frequency of condom use within their relationship on a scale as follows: 1 = never (have never used a condom); 4 = sometimes; and 7 = always (have always used a condom).

Procedure

We recruited participants at university campuses with posters inviting students who were in an ongoing dating relationship over one month old to participate on a voluntary and anonymous basis. Participants responded to the measures individually and privately, in face-to-face interviews in the following order: (1) questions about the participant, partner, and relationship; (2) MIRP; (3) condom use measures. The items of the MIRP were randomized to counter order effects. Similarly, condom use measures (at first intercourse, at latest intercourse, and during the relationship) were counterbalanced. The administration procedure lasted approximately 20 minutes.

3. Results

Construct validity and reliability of the MIRP. A factor analysis with varimax rotation on the MIRP items revealed two factors explaining 71.48% of the total variance (Table 1). We labeled the first factor “Matrimonial Relationship” because it reflected relationships characterized by descriptions alluding to a husband/wife relationship; reliability analysis on its six items indicated high internal consistency (Cronbach’s $\alpha = .89$, standardized $\alpha = .90$, mean inter-item correlation = .59). We labeled the second factor “Hedonistic Relationship” because it reflected relationships characterized by intense sexual passion and pleasure; it was also highly consistent (Cronbach’s $\alpha = .92$, standardized $\alpha = .92$, mean inter-item correlation = .71).

Participants and their sexual profiles. Participants’ profiles on all individual, relationship, and condom use measures of the study appear in Table 2, which also provides comparisons in terms of biological sex.

Mean age of sexual debut was $M = 17.78$ or 18 ($SD = 1.62$). However, men had their first experience with sexual intercourse one year earlier ($M = 17.3$, $SD = 1.61$) than women ($M = 18.1$, $SD = 1.54$), $t(275)=-4.29$, $p < .001$. A condom was used at sexual debut by 81.6% of participants, with no difference between men and women, $\chi^2(1, N = 277) = 14$, $p > .05$. The mean number of reported lifetime sexual partners was 4 ($SD = 4.95$), and men reported twice the number of partners ($M = 8.99$, $SD = 4.95$, $M_w = 4.48$, $SD_w = 4.95$, $t(275)=-4.29$, $p < .001$).
5.57 or 6, SD = 6.52) as women (M = 2.99 or 3, SD = 3.01, t (275) = 4.4, p < .001. The mean number of concurrent sexual partners during the past 12 months was 1 (SD = 1.17); again, men reported twice as many partners (M = 1.70 or 2, SD = 1.49) as did women (M = 1.33, SD = .85, t (275) = 2.52, p < .05.

**Relationships and partners.** The mean duration of participants’ relationships was approximately two years (M = 631 days, SD = 494). More than one-half of the participants (53.8%) stated that they had coital sex at least three times weekly, 31.8% approximately twice weekly, 10.8% approximately once weekly, 2.5% approximately twice monthly, and 1.1% once monthly or less. Using analysis of covariance (ANCOVA), we tested for differences in duration between men and women while controlling for age and frequency of coital sex, and for differences in coital sex between men and women while controlling for age and duration. No differences were observed in either case [F (1, 273) = .98, p > .05 for duration, F (1, 273) = .10, p > .05 for coital sex frequency]. Partner’s age ranged from 16 to 34 years (M=23, SD=3); however, ANCOVA revealed that women had older partners (M = 24, SD = 3.23) than men (M = 21, SD = 1.77), F (1, 274) = 103.39, p > .001, partial η² = .27, despite a covariate effect for participant’s age, F (1, 274) = 116.97, p < .000, partial η² = .30.

**Condom use at first intercourse, at latest intercourse, and during the relationship.** Most participants (77.3%) had used a condom at first inter-

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### Table 1

**Factor loadings for varimax orthogonal two-factor solution for the items of the Measure of Intimate Relationship Perception**

<table>
<thead>
<tr>
<th>Item</th>
<th>Factor loadings</th>
<th>Factor loadings</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Factor 1: Matrimonial Relationship (α = .89)</td>
<td>Factor 2: Hedonistic Relationship (α = .92)</td>
</tr>
<tr>
<td>Affection</td>
<td>.86</td>
<td>.89</td>
</tr>
<tr>
<td>Love</td>
<td>.81</td>
<td>.88</td>
</tr>
<tr>
<td>Tenderness</td>
<td>.81</td>
<td>.88</td>
</tr>
<tr>
<td>Security</td>
<td>.80</td>
<td>.87</td>
</tr>
<tr>
<td>Romanticism</td>
<td>.77</td>
<td>.78</td>
</tr>
<tr>
<td>Trust</td>
<td>.75</td>
<td>.78</td>
</tr>
<tr>
<td>Eigenvalue</td>
<td>5.19</td>
<td>2.67</td>
</tr>
<tr>
<td>Percentage of variance</td>
<td>36.32%</td>
<td>35.16%</td>
</tr>
</tbody>
</table>

N = 277, c > |0.35|.
Table 2
Individual relationship characteristics and condom use measures

<table>
<thead>
<tr>
<th>Variable</th>
<th>All</th>
<th>Men</th>
<th>Women</th>
<th>$\chi^2$ or $t$ (275)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>$M$ or $f$</td>
<td>$SD$</td>
<td>$M$ or $f$</td>
<td>$SD$</td>
</tr>
<tr>
<td><strong>Individual characteristics</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Participant’s sex</td>
<td>277</td>
<td>115</td>
<td>162</td>
<td></td>
</tr>
<tr>
<td>Participant’s age</td>
<td>21.52</td>
<td>1.73</td>
<td>21.68</td>
<td>1.75</td>
</tr>
<tr>
<td>Age of sexual debut</td>
<td>17.78</td>
<td>1.62</td>
<td>17.3</td>
<td>1.61</td>
</tr>
<tr>
<td>Condom use at sexual debut (users)</td>
<td>226 (81.6%)</td>
<td>95 (34.4%)</td>
<td>131 (47.2%)</td>
<td></td>
</tr>
<tr>
<td>Sexual partners in lifetime</td>
<td>4</td>
<td>4.95</td>
<td>5.57 or 6</td>
<td>6.52</td>
</tr>
<tr>
<td><strong>Relationship characteristics</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Partner’s age</td>
<td>23</td>
<td>3</td>
<td>21</td>
<td>1.77</td>
</tr>
<tr>
<td>Partner’s education</td>
<td>2.17</td>
<td>.44</td>
<td>2.04</td>
<td>.26</td>
</tr>
<tr>
<td>Concurrent partners of past 12 months</td>
<td>1</td>
<td>1.17</td>
<td>1.70 or 2</td>
<td>1.49</td>
</tr>
<tr>
<td>Relationship duration (days)</td>
<td>631</td>
<td>494</td>
<td>598.28</td>
<td>468.28</td>
</tr>
<tr>
<td>Coital sex frequency</td>
<td>5.35</td>
<td>.85</td>
<td>5.37</td>
<td>.87</td>
</tr>
<tr>
<td>Hedonistic Relationship</td>
<td>5.52</td>
<td>1.04</td>
<td>5.53</td>
<td>1.04</td>
</tr>
<tr>
<td>Matrimonial Relationship</td>
<td>5.48</td>
<td>1.05</td>
<td>5.18</td>
<td>1.21</td>
</tr>
<tr>
<td><strong>Condom use</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>At 1st intercourse (users)</td>
<td>214 (77.3%)</td>
<td>91 (32.9%)</td>
<td>123 (44.4%)</td>
<td></td>
</tr>
<tr>
<td>At latest intercourse (users) three</td>
<td>166 (59.9%)</td>
<td>70 (25.2%)</td>
<td>96 (34.7%)</td>
<td></td>
</tr>
<tr>
<td>During the relationship (consistent users)</td>
<td>86 (31%)</td>
<td>31 (11.2%)</td>
<td>55 (19.9%)</td>
<td></td>
</tr>
</tbody>
</table>

Frequency of coital sex was measured on a scale from 1 = less than once monthly to 7 = more than three times weekly. Partner’s education follows a gradient from 1 = basic education to 3 = higher education. Condom use at sexual debut, first intercourse, and latest intercourse were dichotic (Yes/No). The table shows those that responded, “Yes, I used a condom” and consistent users.

**$p < 0.01$, ***$p < 0.001$
Table 3
Summary of logistic regression analysis predicting condom use at first and latest intercourse in the relationship

<table>
<thead>
<tr>
<th>Variable</th>
<th>First intercourse condom use</th>
<th></th>
<th>Latest intercourse condom use</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>SE</td>
<td>OR</td>
<td>95% CI</td>
</tr>
<tr>
<td>Participant’s sex</td>
<td>-.35</td>
<td>.44</td>
<td>.70</td>
<td>.30-1.65</td>
</tr>
<tr>
<td>Participant’s age</td>
<td>-.02</td>
<td>.14</td>
<td>.97</td>
<td>.75-1.27</td>
</tr>
<tr>
<td>Age of sexual debut</td>
<td>.28</td>
<td>.14</td>
<td>1.32</td>
<td>1-1.76</td>
</tr>
<tr>
<td>Condom use at sexual debut</td>
<td>2.93</td>
<td>.39</td>
<td>18.72</td>
<td>8.72-40.21</td>
</tr>
<tr>
<td>Partner’s age</td>
<td>-.005</td>
<td>.06</td>
<td>1.05</td>
<td>.932-1.18</td>
</tr>
<tr>
<td>Partner’s education</td>
<td>.28</td>
<td>.21</td>
<td>.88</td>
<td>.58-1.32</td>
</tr>
<tr>
<td>Sexual partners in lifetime</td>
<td>.05</td>
<td>.08</td>
<td>1.00</td>
<td>.86-1.16</td>
</tr>
<tr>
<td>Concurrent partners of past 12 months</td>
<td>-.13</td>
<td>.42</td>
<td>1.33</td>
<td>.58-3.01</td>
</tr>
<tr>
<td>Relationship duration (days)</td>
<td>.00</td>
<td>.00</td>
<td>1.00</td>
<td>1-1.0</td>
</tr>
<tr>
<td>Coital sex frequency</td>
<td>-.02</td>
<td>.21</td>
<td>.99</td>
<td>.65-1.48</td>
</tr>
<tr>
<td>Hedonistic relationship</td>
<td>-.03</td>
<td>.19</td>
<td>.97</td>
<td>.67-1.40</td>
</tr>
<tr>
<td>Matrimonial relationship</td>
<td>-.07</td>
<td>.20</td>
<td>.93</td>
<td>.63-1.39</td>
</tr>
</tbody>
</table>

OR = odds ratio. Sex, 1 = men, 2 = women; Frequency of intercourse ranged from 1 = less than once monthly to 7 = more than three times weekly; Condom use at first and latest intercourse, 1 = no use, 2 = use. Variables had normal distributions. Collinearity diagnostics and the Durbin – Watson test were applied for the 12 variables in both data sets (first and latest intercourse). VIFs were near one, suggesting lack of multicollinearity. The Durbin – Watson tests were 1.67 and 1.71 respectively suggesting that the assumption of independence has been met.

*p < 0.05, ***p < 0.001
### Table 4
Summary of logistic regression analysis predicting condom use consistency during the relationship

<table>
<thead>
<tr>
<th>Variable</th>
<th>Condom use consistency</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
</tr>
<tr>
<td>Participant’s sex</td>
<td>-.19</td>
</tr>
<tr>
<td>Participant’s age</td>
<td>-.45</td>
</tr>
<tr>
<td>Age of sexual debut</td>
<td>-.18</td>
</tr>
<tr>
<td>Condom use at first-ever intercourse</td>
<td>-1.28</td>
</tr>
<tr>
<td>Partner’s age</td>
<td>.04</td>
</tr>
<tr>
<td>Partner’s education</td>
<td>-.07</td>
</tr>
<tr>
<td>Sexual partners in lifetime</td>
<td>.05</td>
</tr>
<tr>
<td>Concurrent partners of past 12 months</td>
<td>-.08</td>
</tr>
<tr>
<td>Relationship duration (days)</td>
<td>.00</td>
</tr>
<tr>
<td>Coital sex frequency</td>
<td>.40</td>
</tr>
<tr>
<td>Hedonistic relationship</td>
<td>.26</td>
</tr>
<tr>
<td>Matrimonial relationship</td>
<td>-.21</td>
</tr>
</tbody>
</table>

OR = odds ratio. Sex, 1 = men, 2 = women; Frequency of intercourse ranged from 1 = less than once monthly to 7 = more than three times weekly; Condom use consistency, 1 = consistent (always use), 2 = inconsistent (never use or use condoms inconsistently). Variables had normal distributions. Collinearity diagnostics and the Durbin – Watson test were applied for the 12 variables. VIF was near one, suggesting lack of multicollinearity. The Durbin – Watson test was 1.70 suggesting that the assumption of independence has been met.

*p < 0.05, ** p < 0.01
course, and a somewhat lower percentage (59.9%) had used a condom at latest intercourse. There were no differences between men and women in either case [$\chi^2 (1) = .393, p > .05$ for first intercourse; $\chi^2 (1) = .73, p > .05$ for latest intercourse]. To examine condom use consistency during the relationship, participants indicating that they had always (or never) used a condom in their relationship (choices “7 = always” or “1 = never” on the frequency of condom use rating scale) were considered “consistent users” (or “consistent non-users”). Users between the two extremes were considered “non-consistent users”. Thus, 63.3% of participants were non-consistent users, 31% were consistent users, and 5.7% were consistent non-users. Again, there was no difference with regard to biological sex; $\chi^2 (2, N = 277) = 1.84, p > .05$.

From a health prevention perspective, non-consistent use is equal to no use, because both practices pose the same high risk for contracting HIV/AIDS and sexually transmitted infections (STIs). We therefore combined non-users and non-consistent users into the category of “inconsistent users” (69%). In further discussion, we will refer to the two categories of condom use as “consistent” and “inconsistent” users.

**Testing empirical expectations.** We performed three binary logistic regression analyses with the criterion variables condom use (use/no use) at first and latest intercourse of the relationship and consistency of use (consistent/inconsistent use) during the relationship. Predictor variables and analyses appear in Tables 3 and 4.

**Condom use at first intercourse, at latest intercourse, and consistent use during the relationship.** In accordance with empirical expectation, the individual variable “condom use at sexual debut” predicted condom use at first intercourse (Table 3). Participants that had used a condom at sexual debut were more likely to do so at first intercourse ($OR = 18.72, p < .001$) and latest intercourse ($OR = 2.14, p < .05$) in their relationship. However, two relationship variables, “relationship duration” and “hedonistic relationship type”, also predicted condom use at latest intercourse. Reduced likelihood of condom use at latest intercourse was associated with longer relationship duration ($OR = .75, p < 0.05$) and greater description of the relationship as hedonistic ($OR = .72, p < 0.05$) (Table 3). Consistent condom use was predicted by coital sex frequency and condom use at sexual debut. Consistent use was more likely in relationships with relatively low coital sex frequency ($OR = 1.49, p < 0.05$) and when a condom had been used at sexual debut ($OR = .28, p < 0.01$) (Table 4).

**4. Discussion**

We expected that individual characteristics would be associated with condom use at first intercourse, while relationship characteristics would be associated with condom use at latest intercourse and during the relationship. At first intercourse, when, presumably, sexual contacts had only recently ensued among the partners and relationship features were not strong enough, the only factor associated with condom use was indeed an individual one, condom use at sexual debut (Table 3). However, contrary to expectation, condom use at sexual debut was also associated, along with relationship features, with consistent condom use during the relationship (Table 4) and condom use at latest intercourse (Table 3).

Previous research suggests (Miller, Levin, Whitaker, & Xu, 1998; Shafii, Stovel, Davis, & Holmes, 2004) that the practice established by adopting condom use at sexual debut may form a habit strong enough to carry over to sexual relationships later in life (Miller et al., 1998; Shafii et al. 2004). According to the “habit formation” argument, regular condom use does not depend on positive norms, risk calculations, or communication skills; it is a habit that develops early and is sustained by the force of non-deliberation. Recently, “habit formation” has been directly implicated in the association between first intercourse and latest intercourse condom use (Stulhofer, Bacak, Ajdukovic & Graham, 2010). The “habit formation” interpretation is consistent with the observed association between sexual debut condom use and condom use at first intercourse, at latest intercourse,
and during the relationship. Specifically, the condom use habit appears to be very strong at the outset of a relationship and maintains some of its strength during the course of the relationship (Tables 3 and 4). However, we cannot argue that condom use in the relationship has occurred habitually and “without deliberation”, because we have not directly examined habit formation variables in the present study as Stulhofer et al. (2010) did. Future research should focus on examining the mediational role of such variables in the association between condom use at sexual debut and condom use in a relationship.

The association of latest intercourse condom use with relationship duration and relationship type was consistent with expectation. In particular, the negative association of relationship duration with condom use has been observed previously (e.g. Fortenberry et al., 2002; Katz et al., 2000). Past interpretations of this association have been based on “contraception switch” (Abraham, Sheeran, Abrams, Spears, 1996; Ku et al., 1994; Noar et al., 2004), intimacy development, and familiarity (Civic, 2000; Hammer, Fisher, Fitzgerald, & Fisher, 1996; Kordoutis et al., 2005; Maticka-Tyndale, 1992). Presumably, the passage of time and the associated frequency of sexual contacts raises concerns about unwanted pregnancy, making contraception more important than condom use. In addition, partners start to feel that condoms are unnecessary, believing that no health threat can arise from a trusted lover (“defensive denial”, Hammer et al., 1996; Sprecher, 1990). By switching to chemical contraception, the communication stress of condom initiation is avoided and the intimacy atmosphere of the relationship is not disturbed (Oncale & King, 2001; Hammer et al., 1996). The negative association of consistent condom use with coital sex frequency observed in the present study further supports the latter interpretation. Coital sex frequency appears to seriously hamper the stability of the decision to use condoms, possibly by enhancing concerns about unplanned pregnancy and by encouraging “contraception switch”.

The observed negative association of latest intercourse condom use with the perception that the relationship is hedonistic is rather uncommon (however, see Kordoutis, 2010), although theoretically reasonable. The rational proposal of using a condom may come in sharp contrast to the intimacy context, particularly when it is perceived as intensely sexual and passionate. Partners in contexts characterized by erotic passion tend to focus on exchanging affective and sexual resources (Metts, 2004) with the aim of stimulating intimacy (Baumeister & Bratslavsky, 1999). Therefore, they are unlikely to engage in rational considerations about the possible health risks involved in unprotected sexual contact. Moreover, arousal, passion, and coital sex construct a framework in which initiation and negotiation around the condom is perceived as undesirable and threatening to the cherished intimacy of the moment and the relationship. Individuals in this setting may refrain from initiating condom use to avoid confrontation with a partner and disruption of sexual exchange or intimacy (Cline, Freeman & Johnson, 1990; Cline, Johnson, & Freeman, 1992; Klein & Knauper, 2003; Hillier, Harrison, & Warr, 1998; Orbell & Sheeran, 1998; Civic, 2000; Kordoutis et al, 2000; Sarafidou & Chliaoutakis, 1994; Sprecher, 1990). We had expected that the negative association between hedonistic relationship perception and condom use would also appear during the relationship. However, this was not the case. Perhaps consistency of condom use during the relationship is less sensitive to situational influences than the one-time latest intercourse measure.

Our findings draw attention to the role of relationship characteristics in condom use by emphasizing that passion and sexual pleasure involved in sexual relationships may work as counter motives to the rational decision of protection. Thus far, the negative role of sexual pleasure and passion in condom use has been acknowledged indirectly in studies of attitudes toward condoms (Civic, 2000; De Wit et al., 1997; Helweg-Larson & Collins, 1994; Sacco, Levine, Reed, & Thomson, 1991; Sarafidou & Chliaoutakis, 1994; Chliaoutakis, Sokratakis, Darviri, Gousgounis & Trakas, 1993; Sheeran, Abraham, Abrams, Spears, & Marks, 1990; Sheeran, Abraham, & Orbell, 1999; St.
Lawrence, Reitman, Jefferson, & Alleyne, 1994). As far as we know this is the first study showing that actual –self-reported– condom use behavior in established (but hedonistic or passionate) relationships is negatively associated with condom use. It must be emphasized that we are not referring to casual relationships but rather youthful short term or medium length steady relationships predominantly characterized by passion and hedonism. Previous literature has concentrated on short-term, sexual and casual relationships, one-night stands and/or non-steady relationships as compared to long-term, companionate ones or matrimonial, where partnership outweighs passion. Indeed, we very well know, that young adults tend to use condoms more frequently in the former varieties of relationships (short-term, sexual, casual, one-night stands, non-steady) than the latter. However, are either of these relationships, the relationships that most young adults actually pursue? There is evidence suggesting that most young people would rather get involved in a different kind of relationship: a hedonistic one or one of passion. Indeed, the experience of passionate or hedonistic relationships is rather common among young adults (Hatfield, Schmitz, Cornelius & Rapson, 1988; Emers-Sommer & Allen, 2005) and most frequent among Greek young adults (Kordoutis, Loumakou Sarafidou, 2000; Kordoutis, 2010). Unfortunately, the findings of the present study, seem to suggest that this compatible with youthfulness preference for hedonistic or passionate relationships, may be exposing young adults to the risks of unprotected sex. Future research should pursue more systematic exploration of this issue.

In conclusion, in agreement with current research, our findings draw attention to the role of relationship characteristics in condom use. However, they also emphatically remind us that individual characteristics, such as condom use at sexual debut, contribute significantly to condom use decision-making. Our conclusions are limited by the non-probabilistic convenience sample of our study. Nevertheless, the associations detected may be informative for health prevention strategies, particularly in Greece, a country that needs research-based intervention strategies regarding sexual health (Halkias, 2004). Health prevention should address the issue of condom use with young people at an early age, before the onset of their sexual debut (before 17 years of age in the case of the Greek population of young adults). It is important that young people use condoms from their very first sexual contact, as this appears to establish a resilient protective habit. Relationship length and frequency of coital sex do establish desirable familiarity and intimacy with a partner; however, they may also work as a deceptive protection mechanism against the health risk of contracting HIV or STIs. Furthermore, relationship length and sex frequency may encourage the abandonment of condom use in favor of chemical contraception. Health campaigns should advise young couples about the risks involved in mistaking intimacy for protection, and against the “contraception switch”, which clearly exposes them to the risk of HIV and STIs.

Finally, campaigning for condom use can make could use of the distinct contribution of the present work to the condom use literature. The roles of passion and pleasure as motives that work against protection should be included in the campaigning agenda. Framing the matter positively, campaigns could argue that condoms can enhance pleasure and passion by substantially reducing concerns about the risks associated with sexual intercourse.

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Η χρήση προφυλακτικού από Έλληνες νεαρούς ενήλικες κατά τις ανεπίσημες ερωτικές τους σχέσεις: ο ρόλος της πρώτης συνεύρεσης της σεξουαλικής ζωής και των χαρακτηριστικών της σχέσης

ΠΑΝΑΓΙΩΤΗΣ ΚΟΡΔΟΥΤΗΣ

Εξετάσαμε κατά πόσον χαρακτηριστικά ατομικά και σχέσεων προέβλεπαν την χρήση προφυλακτικού σε τρέχουσες σχέσεις νεαρών Ελλήνων ενήλικων. Οι συμμετέχοντες ήταν 277 φοιτήτες και φοιτήτριες με τρέχουσες ανεπίσημες ερωτικές, οι οποίες/ανέφεραν τα δημογραφικά τους στοιχεία και πληροφορίες για το σεξουαλικό τους προφίλ, τους συντρόφους τους και τις σχέσεις τους. Επίσης, αξιολόγησαν, χρησιμοποιώντας κλίμακες, τις σχέσεις τους, ως προς το εάν είχαν συζυγικά και ηδονιστικά (πάθος) χαρακτηριστικά και δήλωσαν εάν είχαν χρησιμοποιήσει προφυλακτικό κατά την πρώτη ερωτική συνεύρεση, την πιο πρόσφατη, και κατά τη διάρκεια της σχέσης. Ήταν πιο πιθανό να έχει χρησιμοποιηθεί προφυλακτικό κατά την πρώτη συνεύρεση, την πιο πρόσφατη και κατά τη διάρκεια της σχέσης, όταν είχε είσοδο χρησιμοποιηθεί στην πρώτη συνεύρεση της σεξουαλικής ζωής του ατόμου. Εντούτοις, ήταν λιγότερο πιθανό να έχει χρησιμοποιηθεί στην πιο πρόσφατη συνεύρεση, στις κρούσεις και και στις πιο ηδονιστικές σχέσεις. Συν τούτοις, η αυξημένη συχνότητα συνευρέσεων κατά τη σχέση συνεπόταν με πιο ασυνεπή χρήση. Φαίνεται ότι η χρήση προφυλακτικού στην πρώτη σεξουαλική συνεύρεση της ζωής του ατόμου εγκαθιστά μία ανθεκτική συνήθεια χρήσης προφυλακτικού στις μελλοντικές σχέσεις. Ωστόσο, η διάρκεια της σχέσης, το σεξουαλικό πάθος, και η συχνότητα των σεξουαλικών συνευρέσεων φαίνεται ότι υπονομεύουν τη χρήση προφυλακτικού. Η σεξουαλική αγωγή υγείας για την προώθηση της χρήσης προφυλακτικού θα πρέπει να αρχίζει σε νεαρή ηλικία, πριν την πρώτη σεξουαλική συνεύρεση της ζωής του ατόμου, τονίζοντας ότι η διάρκεια της σχέσης, η συχνότητα σεξουαλικών συνευρέσεων και το πάθος, είναι δυνατόν να καταστέλλουν τις συμπεριφερειακές προφυλάξεις σε μία σχέση.

ΠΕΡΙΛΗΨΗ

Λέξεις-κλειδιά: Χρήση προφυλακτικού, Χαρακτηριστικά σχέσεων, Πρώτη σεξουαλική συνεύρεση στη ζωή, Κοινωνική ψυχολογία της υγείας, Σεξουαλική αγωγή υγείας, Νεαροί ενήλικες.

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