The First Romantic Relationship of Adolescents: An International Comparative Analysis

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Abstract

An international comparative survey on university students is analyzed, in order to find out factors accelerating or delaying entrance into the first romantic relationship of teenagers. Data are retrospectively collected, distinguishing for ages 11-13, 14-15, 16-18, at interview. Using event history analysis, factors significant from a theoretical viewpoint or noteworthy from literature are tested. For Italy, Japan, Russia, and the USA two models are assessed (for males and females). As Italian sample is wider, complex models are estimated only for Italy, including also unobserved heterogeneity. Variables strongly significant everywhere are: age (with a decreasing hazard after age 18, except for Japan), social control (of both family and school), satisfaction of physical appearance, some aspects of the character (shyness, attitude toward social life…). Moreover, religion plays a complex role in Italy. Finally, unobserved heterogeneity does not play a substantive role, even if it is statistically significant for Italian male.

1. Introduction

Adolescence is a time of great changes in the course of an individual's life. Young people are subject to biological, psychological, and social development. They start their quest for autonomy from authorities like parents, family, and school. They begin to discover and to be aware of themselves and try to find their place in the world. (Erkison, 1968; Sebald,1992; Steinberg and Sheffield Morris, 2001).

Adolescents spend an increasing amount of time with their friends, and conversely the time spent with their parents is reduced. (Larson and Richards, 1991). As a result, teenagers often influence each other. (Susman et al. 1994). They start to develop their own personal beliefs and ways of life. Sometimes they fight against the rules set by their parents; sometimes they try to persuade them to be less strict, and sometimes they simply accept those rules. Parents continue to have an important role, influencing the adolescents' relationships with their peers. (Brown et al, 1993).

Young people often join *cliques*: small groups of peers that are based on friendship and shared activities. (Steinberg and Sheffield Morris, 2001). During middle adolescence (around age 14-15), cliques change from being single-sexed to mixed-sexed, and many adolescents become intimate friends with members of the opposite sex. In late adolescence (around age 16-18), cliques often become groups of dating couples (Brown, 1990; Richards et al 1998). Finally, dyadic romantic relationships form. (Furman et al.; 1999, Furman, 2002).

However, as Steinberg and Sheffield Morris, (2001: 95), affirm: "*researchers interested in adolescent development have paid shockingly little attention to the nature and function of teenagers' romantic relationships, despite the well-documented fact that, by middle adolescence, most adolescents have had a boyfriend or girlfriend […], seldom do they examine individuals at the beginning stages of experimentation with intimate, sexual relationships*".

One of the few studies analyzing the entrance into first romantic relationship can be found in Ongaro and Billari (2002). By using Italian data, the authors estimate a logistic model taking into account three sorts of covariates that are related to (1) the individual background (such as age and area of residence), (2) the parents and the family, and (3) the respondent's biological and psychological development.

Their results show that age, having a deceased parent, often going night-clubbing, often practicing sports, the size of friendship networks, the gender of friends and having experienced the first kiss are significant in shaping this process. By contrast, the geographical area (North versus South of Italy) and the father's level of education are significant only for females.

Other studies, all sampling American high school students, show that having friends of the opposite sex increases the likelihood of entering a romantic relationship (Furman et. al, 1999; Connoly et. al., 2000). The affective relationship with parents too – regardless of how close or distant it might be - is known to influence the individual's behavior toward romantic relationships. Couple relationships may be related with other adolescents' characteristics, such as antisocial or bullying behavior, health status, or fear of being rejected. (Furman, 2002: 180). As previously said, very little is known about this topic of research.

Furthermore, in the last decade of 20th century, the social norms referring to young people's behavior became more permissive and tolerant in Italy, like in many other western countries. (See Buzzi et al., 1997 for Italy, Ford et al., 1999 for United Kingdom and Hogan et al., 2000 for United States). Consequently, young people's attitudes and behavior toward the opposite sex are rapidly changing, especially for females.

For these reasons, we believe that this explorative analysis could further enlighten this field of research. By estimating an event history model, the role of several determinants will be tested to see which one of them is significant. These causal factors relate to the respondent's personal background, relationship with parents, religiosity, school performance and social life.

Table 1 shows some parameters of the respondents' affective and sexual behavior. Italy has the lowest age at first romantic relationship, while France has the highest one for males, and Japan for females. 84.0% of the males and 89.5% of the females among the sampled Italian university students declared to have had at least one couple relationship. By contrast, only 67.6% of Japanese boys and 75.7% of Japanese girls have declared to have experienced at least one couple relationship.

In all the countries the age at first relationship is lower for females than for males. In Russia the difference is the largest, showing very different behaviors for males and females. In Japan and Romania, on the contrary, the difference is very little, therefore these behaviors should be more similar.

The age at first sex is always earlier for males, with the exception of Japan and USA. In Italy this difference is very little, while elsewhere it is equal to, at least, one year.

If we compare the age at first sexual intercourse to the age at first romantic relationship, we can notice that the first one is higher in all these countries, except for France and for Bulgarian and Russian males. Moreover this difference is near zero for Romanian males. In these four countries also the percentage of male respondents who engaged in first intercourse outside a steady couple relationship is markedly high. In Japan, Poland, Romania and the USA more than 70% of female adolescents had their first intercourse while in a steady relationship. In Italy this percentage is nearly 90%, and the difference between the two median ages is nearly 3.5 years.

However, for all the countries examined, the majority of the girls experienced their first sexual intercourse within a steady couple relationship, while it is not so for the males. The differences between the sexes are still widespread.

Table 1. Some characteristic of the surveys and some parameters of affective and sexual behavior of respondents

	Italy	Japan	Poland	Romania	Bulgaria	Russia	USA	France
SOME CHARACTERISTICS OF THE SURVEYS								
Number of Universities involved	23	19 ([2])	4	4	7	8	1	3
Number of respondents ([3])	4,792	976	1,555	1,305	1,119	1,704	1,066	303
Mean age at interview	20.9	20.7	20.9	19.9	20.4	20.3	20.2	20.6
SOME PARAMETERS OF AFFECTIVE BEHAVIOR								
Median age at first couple relationship ([4])								
males	16.3	18.5	18.3	17.6	17.6	18.0	17.8	18.6
females	15.8	18.4	18.0	17.5	17.1	17.3	17.2	18.1
difference	+ 0.5	+ 0.1	+ 0.3	+ 0.1	+ 0.5	+ 0.7	+ 0.6	+ 0.5
% of respondents who had a couple relationship								
males	84.0	67.6	76.2	81.6	80.7	71.7	81.3	71.2
females	89.5	75.7	80.3	80.3	82.7	81.3	84.1	82.9
SOME PARAMETERS OF SEXUAL BEHAVIOR								
Median age at first intercourse ([4])								
males	18.9	20.1	19.4	17.8	16.2	17.0	19.3	16.7
females	19.2	19.9	20.4	20.1	17.4	18.3	18.9	17.9
difference	*- 0.3*	*+ 0.2*	*- 1.0*	*- 2.3*	*- 1.2*	*- 1.3*	*+ 0.4*	*- 1.2*
% of virgins								
males	30.7	39.6	34.6	25.1	8.4	18.9	31.6	13.8
females	35.9	42.0	44.6	47.6	19.9	30.3	32.9	20.8
% of respondents who had first sex with a couple partner								
males	63.9	72.8	42.8	37.7	29.0	27.6	65.8	26.3
females	89.9	86.5	76.8	72.7	63.6	57.2	79.0	58.2
Difference between median age at first couple relationship and at first intercourse								
males	+ 2.6	+ 1.6	+ 1.1	+ 0.2	- 1.4	- 1.0	+ 1.5	- 1.9
females	+ 3.4	+ 1.5	+ 2.4	+ 2.6	+ 0.3	+ 1.0	+ 1.7	- 0.2

([1])The International Research on Sex of Students was co-coordinated by F. Billari (University "Bocconi", Milan) and G. Dalla Zuanna (University of Padua). The Italian survey was directed by G. Dalla Zuanna, and funded by the University of Messina. The Japanese survey was directed by R. Sato and funded by the Ministry of Welfare of Japan. The surveys carried out in Eastern European countries were directed by W. Wroblewska (Poland), C. Muresan (Romania), T. Kotzeva (Bulgaria), M. Denissenko (Russia), and funded by the Max Planck Institute for Population Studies (Rostock, Germany). The survey in the USA involved the students of Brown University, Providence, RI, and was directed by G. Dalla Zuanna and L. Bernardi. In France, questionnaires were collected by E. Brown. In Australia, data are still being collected.

([2]) Number of different prefectures in which the universities are located.

([3]) After excluding respondents born before 1975 and those with missing data relating to the year of birth or the sex.

([4]) The median age is calculated by means of a survival technique (Kaplan-Meier) so as to take censored data into account.

In this paper, we shall analyze the data concerning Italy, Japan, Russia, and the USA by means of one same event history model for all of the countries. This model will be presented in the third paragraph. These countries were selected for their very different cultural, social, and demographical backgrounds. Italy is still nowadays characterized by a strong influence of the Catholic Church and its beliefs (Castiglioni et al., 1997). Japan has a long tradition of arranged marriages where the spouse is carefully chosen by the parents (Goldman et al., 1995), and being friends with someone of the opposite sex is not so common (Table 2a and 2b). Russia is characterized by an early age at first intercourse often experienced outside a steady couple relationship, especially for males. (Denissenko et al., 1999), and by a social context which is quickly changing. In the USA too, there is an early age at first intercourse - if compared to Italy and Japan – although romantic relationships are widespread between adolescents. Finally, in Italy, Russia, and the USA friendships with members of the opposite sex are rather common, and increase in late adolescence slightly more in Italy, slightly less in the USA.

Table 2a. Friends by sex at 14-15 years, males, column percentages.

	Males				Females			
Country	Italy	Japan	Russia	USA	Italy	Japan	Russia	USA
No friends	0.6	0.8	1.1	1.1	0.4	0.4	1.3	1.2
Mostly or all males	51.0	69.9	55.7	59.2	10.6	1.0	13.9	9.4
Mostly or all females	4.5	0.8	4.3	15.2	38.5	70.8	40.5	62.4
Half and half	43.9	28.4	38.9	24.5	50.5	27.8	44.2	27.0
N	1,964	373	763	380	2,777	598	934	686

Table 2b. Friends by sex at 16-18 years (16-17 for the USA), males, column percentages.

	Males				Females			
Country	Italy	Japan	Russia	USA	Italy	Japan	Russia	USA
No friends	0.5	0.2	0.7	0.5	0.4	0.3	0.8	0.2
Mostly or all males	27.6	70.8	36.7	37.6	18.1	2.5	22.1	15.6
Mostly or all females	11.1	1.1	9.7	21.6	19.5	73.6	24.1	46.3
Half and half	60.8	27.9	52.9	40.3	62.0	23.5	53.0	37.9
N	1,964	373	764	380	2,776	599	932	686

Hence, there are two interesting analyses to perform: to uncover the determinants for this event among Western adolescents, and to identify the characteristics of those who never had a romantic relationship.

All models will be estimated separately for males and females, whose behavior are supposed to be different, as table 1 points out. Models 1-4 will deal respectively with Italy, Japan, Russia and the USA.

As the Italian larger sample allows it, two more models (model 5 and 6) will be estimated only for Italy. They will be more complex and detailed, including several additional variables in order to test the role of some specific hypotheses. The second model will also consider the unobserved heterogeneity. Therefore, it will test whether there are any unobserved characteristics present in the process of entrance into first romantic relationship for Italian adolescent boys and girls.

2. Data

This analysis is based on some standardized surveys carried out in 2001-2003, focusing on the sentimental and sexual life of university students in several countries. (See table 1). The survey is statistically representative for Italian students of Economics and Statistics (Dalla Zuanna, 2002) and Japanese students attending first and second year of state universities (Sato et al., 2003). For Eastern European countries and France, 3 to 8 universities (faculties of Social Sciences) were selected from different geographical regions, but without nationally representative samples. For the USA, the students of Brown University, Providence, RI, were interviewed by means of an online questionnaire.

In all countries but Japan, the questionnaires were completed during a one-hour lesson under the discreet surveillance of a researcher. The students were also reminded to be aware of their responsibility for the success of the research. This resulted in a practically non- existent refusal to fill in the questionnaire. (Note that the rate usually is 20%-30% in face to face interviews and as much as 50% in postal questionnaires in Italy as elsewhere). In Japan, the questionnaire together with a pre-stamped and pre-addressed envelope was given to the students during a one-hour lecture, and a little gift was promised for each respondent. Nevertheless, only 50% of questionnaires were sent back to the researchers (Sato et al., 2003).

The questionnaire was the same for each countries, with a few differences due to religion, ethnical composition and school system. It was originally written in English and Italian, and it was

subsequently translated from English into the other national languages by professional translators, and carefully checked by the responsible parties of the survey in each country.

The questionnaire is composed of about 200 close questions in 16 pages and takes 30 minutes to complete. The questionnaire gathers information on the respondents personal and parental background, the quality of the relationship with the parents, the religion (including church attendance of both students and their parents), health status (physical and psychological) and physical characteristics (height, weight, satisfaction with one's physical appearance), school performance, leisure (sport activities, voluntary work, night, etc.), risky behavior (smoking, drugs, alcohol, high-speed driving, etc.), friendship network, first sexual intercourse, romantic relationships, living arrangements, opinions and sexual behavior related to STDs. A final section deals with opinions and attitudes concerning various aspects of affective and sexual behavior.

Some information[1] refers to different stages of the adolescence (ages 11-13, 14-15, 16-18). (Dalla Zuanna, 2002).

2.1 Data quality

A self-administered questionnaire is an almost unavoidable choice when dealing with delicate and intimate questions such as those concerning aspects of affective and sexual behavior. (Lauman et al. 1994, Buzzi, 1998). However, this type of questionnaire has some serious drawbacks. With a self-administered questionnaire it is more difficult to include some complex questions, and there usually is a higher risk of non-response.

Since all the respondents were university students, the problems related to language and the comprehension of questions should be of minor importance. The non-response rate was very low in this questionnaire.

Generally, non-responses tend to increase when individuals are asked retrospective questions about their life. However, in this survey the missing answers were often lower than 5% for quantitative questions, especially in Italy and the USA, and not much higher for questions concerning the timing of events, particularly for dates. (See table 3).

Table 3. Percentages of respondents not reporting some specific information.

	Italy	Japan	Russia	USA
% OF RESPONDENTS NOT REPORTING SPECIFIC INFORMATION (1)				
Among students who had at least one couple relationship				
year at first couple formation	7.4	2.3	6.2	1.8
month at first couple formation	24.9	10.6	29.0	7.8
year at last couple formation	4.4	4.4	4.8	1.1
month at last couple formation	8.8	7.4	18.2	2.7

([1]) After excluding respondents born before 1975 and those with missing data for year of birth or sex.

Since the study was restricted to young people, who were adolescents in the 1990s, all the respondents who were born before 1975 or did not give their year of birth were not included in the final datasets.

The sample was further reduced by deleting all the individuals for whom it was not possible to determine whether they had a couple relationship. Finally, the sample comprised 4,693 young people for Italy, 974 for Japan, 1,703 for Russia and 1,066 for USA.

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[1] They are: closeness to parents, attendance to religious functions and religious groups, school grades, gender of friends, involvement in sport activities, night-clubbing, satisfaction of one's physical appearance, smoking. Questions on alcohol, use of marijuana, ecstasy or similar drugs, age at first use and present-time frequency were all included in the questionnaire.

When the exact date of the first romantic relationship was missing, a temporal window was built between the 10th birthday and the beginning of the last romantic relationship. (This last question had less missing answers). If also this answer was missing the window for the event was built between the 10th birthday and the interview date.

3. Methods

3.1 Event history models

Since these data where collected for the explicit purpose of allowing a time data analysis, an event history analysis will be performed. These models are particularly suitable to these data, because they permit censored data and time varying explanatory variables.

We have assumed that each individual in the sample was exposed to the risk of having a romantic relationship from his 10th birthday onward. If a young person had no relationship, he is censored at the time of the interview.

The intensity regression model equation is:

$$\ln h_i(t) = y(t) + \sum_k \alpha_k x_{ik} + \sum_m \beta_m w_{im}(t) + V_i \qquad (1)$$

where h_i is the intensity, that is the log-hazard of entering a romantic relationship for a young person i at time t. t is the time elapsed since 10th birthday. y(t) is the baseline log-hazard, that is specified according to a piecewise continuous linear Gompertz function, which picks up the effect of this duration on the intensity.

To be more exhaustive, y(t) is a vector of $v_n + 1$ spline variables whose coefficients are allowed to differ between intervals separated by v_n nodes. Denoting the nodes as $v_p(t)$, it is possible to define the spline variable for the p-th interval as:

$$Y_p(t) = \max[0, \min(t - v_{p,} v_{p+1 - p})] \qquad (2)$$

This kind of baseline allows for a variety of patterns of the duration dependence in the hazard function. (Aasave et al., 2003).

The $\{x_{ik}\}$ are the time constant covariates, which will be described in more detail in paragraph 3.3. For models 1-4 these are: closeness to father and to mother, reaction to family and school rules, father and mother attendance to religious functions. For models 5-6 these are: geographical area, elder siblings, closeness to father and to mother, reaction to school and family rules, father and mother attendance to religious functions, health diseases.

The $\{w_{im}\}$ are the time varying covariates, whose values change at discrete times and that are constant in the time between these changes. α and β are their respective regression parameters. (See, for instance, Beise and Voland, 2002). For models 1-4 these are: respondent's attendance to religious functions, school grades, whether the respondent was satisfied with his physical appearance, involvement in sport activities, smoking, night-clubbing. For models 5-6 these are: school grades, respondent's attendance to religious functions and religious groups, parents' age, involvement in sport activities, night-clubbing, whether the respondent was satisfied with his physical appearance, smoking, getting drunk. They will also be described in paragraph 3.3

V_i represents the unobserved heterogeneity. It is not taken into account in models 1-5, but only in model 6.

The software aML, release 1.04, (L. A. Lillard and C. W. A. Panis, 2000) was used to run all models.

3.2 Unobserved heterogeneity

The key role of unobserved heterogeneity (i. e. individual characteristics that cannot be directly asked in a questionnaire or cannot be measured) in the process of entrance into first marriage is well known. E. g., health-related selection mechanisms into first marriage are effective in many countries, such as in the United States and in Japan. (Hu and Goldman, 1990, Fu and Goldman, 1994, Fu and Goldman, 1996, Goldman et al., 1995). It is also known that health status influences the likelihood to have a romantic relationship during adolescence. (Caltabiano, 2002).

Therefore, in model 6 we will test whether there is any unobserved characteristic influencing the process of entrance into first romantic relationship for Italian male and/or female adolescents.

To take these unobserved characteristics into account and to check their possible impact on the hazard, a normally distributed random effect with a mean of zero and a variance of sigma square is included in one of the models.

An estimated standard deviation of sigma significantly different from zero will point out that there are unmeasured individual characteristics, which influence the entrance into first romantic relationship.

It is known that the estimation of an hazard model based on single spell data can be severely biased, in particular when the estimated value of sigma is small. Nevertheless, by using several time varying covariates, as in the above-specified model, the accuracy of estimates certainly improves. (Aasave et al., 2003).

3.3 Explanatory variables

Here the explanatory variables used in all the models are listed and described, and grouped by type.

The first four, simpler, explorative models describe the hazard of having the first romantic relationship in Italy, Japan, Russia and the USA. The last two model are more complex, including more determinants and the unobserved heterogeneity. They are estimated only for Italian teenagers. They will be presented later.

All six models have two sub models: one for males and one for females, designated by letter M (males) and F (females).

Variables included in models 1-4:
Age of the respondent. It is likely that the hazard of having a relationship it is not steady with time, but increases with age.
Closeness to parents: whether the respondent felt close, or distant, to father and/or mother.
Reaction to rules set by parents (the respondent was asked if he agreed without arguing, tried to persuade the parents to be less strict, or fought with them).
These variables evaluate the role of the family in the teenagers' life and behavior. It is well known that the quality of the relationship with parents influences many aspects of young people's attitudes, such as the age before which adolescents think they should not have sexual intercourse. For females, in particular, some authors analyzing the USA samples found that a good relationship with the mother delays the age at the first sexual intercourse. (Blake et al., 2001, Karofsky et al., 2001, Rodgers, 1999). Moreover, adolescents who have strict and distant parents could have fewer possibilities to both meet and establish a steady relationship with a partner. (Hovell et al., 1994).
As a consequence, the two variables listed above can be used as proxies to evaluate the role of parents in the lives and behavior of their adolescent children.
Respondent's attendance to religious functions. *Parents' attendance to religious functions* when the respondent was thirteen year old. Some religions, such as the Catholic and the Orthodox religion, and other Christian groups, that are prevalent respectively in Italy, Russia, and the USA, requires people to be married before having sexual intercourse, although they do not discourage romantic

relationships. (In the past, however, long romantic relationships were discouraged, also in order to avoid extramarital intercourse and pregnancies).

However, it could be hypothesized that young people, who are closest to religious principles, may find it difficult to meet a partner who accepts delaying sexual intercourse, and therefore they are unlikely to enter a steady couple relationship. Therefore, we will test if the religiosity has any role in this process and, if so, what kind of influence does it have on the adolescent.

In Japan, religious norms and believes are not as important as the attachment to tradition. According Japanese traditional customs young men and women have to live separately. Consequently, more religious Japanese young people should be also more conservative, and therefore are less likely to begin a relationship.

School grades and *reaction to school rules* during high school. (The respondent was asked whether he accepted them, or whether he accepted them but thought they were strict, or refused them and often complained to teachers). Research has shown that adolescents who date frequently consistently and significantly exhibit lower levels of academic performance (Quatman et al., 2001). Moreover lower educational goals and achievement are positively associated with initiating sexual intercourse at a younger age (Schvaneveldt et al., 2001).

Involvement in *sports activities, night-clubbing* and *smoking* (this last is also supposed to be a behavior that is more frequent amongst adolescents involved in peer groups). Adolescents, who have an active social life, take part in many social activities, probably are more extrovert and open to relationships with other people. Hence, they are more likely to start a romantic relationship. Conversely, adolescents that are not involved in this sort of leisure interests are more introverted and less exposed to the hazard of entering a romantic relationship.

Moreover, during adolescence, almost all teenagers practice some kind of sports activity. (Table 4).

Table 4: percentage of respondents never practicing sport at age 14-15 by sex

Country	Males	Females	N
Italy	7.6	19.8	4,741
Japan	13.1	27.8	975
Russia	7.2	15.1	1,686
USA	14.2	13.8	1,063

Consequently, those not practicing any sports activity are probably a selected group, either because there are physically less capable, or because their parents do not allow them to practice sport or because they can't afford the expense.

Whether *the respondent was pleased with his/her physical appearance*. It is possible that adolescents who are less satisfied with their physical appearance are less likely to be engaged in a relationship.

Further variables included in models 5-6:
Geographical area where the respondent lived during high school. In Italy territorial differences (North, more open minded, versus South, having a more traditional social context) are very important determinants of sexual behavior, particularly for females (Billari and Borgoni, 2002).

Elder siblings: they influence the timing of younger siblings' first intercourse, because they are "orientational" for them (Widmer, 1997, Udry et al., 1995). It would be interesting to test whether this applies also to romantic relationships.

Parents' age: This variable supposes that younger parents are more permissive and tolerant towards their sons' and daughters' behaviors.

Attendance to religious groups. Those young people who are more religious could also be more involved in religious groups, which, in the last decades, have become prevalently gender mixed in the last decades. Consequently, in this case, relationships are more likely to start.

Health problems: the respondent was asked if, during adolescence (14-18 years old), he suffered of health problems such as eating problems and insomnia, serious sight or hearing difficulties, heavy sweating on the palms of the hand.

Getting drunk. If a spouse selection process exists, young people with an unhealthy or risky life style, such as alcohol abuse, should also be less likely to start a relationship. Obviously, also the other causal direction is possible: adolescents engaged in risky behavior might also be less interested in having a steady partner, because they prefer occasional ones.

However, heavy drinking is often a common behavior in peer groups. Therefore, it may be that adolescents that sometimes get drunk with their friends are more likely to meet a partner.

4. A cross-country comparison

In the first four models, the hazard of entering into the first romantic relationship was estimated for the following four countries: Italy, Japan, Russia, and USA.

Results are presented in tables 5 and 6 (baseline hazard, respectively males and females), 7 and 8 (relative risk for covariates, respectively males and females), while in figure 1 and 2 the baseline hazard is plotted, respectively for males and females.

Table 5: baseline hazard for males, models 1M-4M.

Baseline		Italy	Japan	Russia	USA
Age:	10-12 years old	0.83 ***	0.72 ***	0.88 ***	0.44 *
	13-14 years old	0.12 **	0.33 **	0.56 ***	0.93 ***
	15-18 years old	0.07 ***	0.12 **	0.16 ***	0.33 **
	19-25 years old	-0.16 **	0.01	-0.11	-0.36 ***
Intercept	-	-5.13 ***	-5.40 ***	-6.91 ***	-4.25 ***
Log-likelihood		-5864.99	-1164.88	-2099.89	-1279.94

(Note: * $p<0.1$, ** $p<0.05$, *** $p<0.01$)

Figure 1: baseline hazard for age, males, models 1M-4M (origin: age 10)
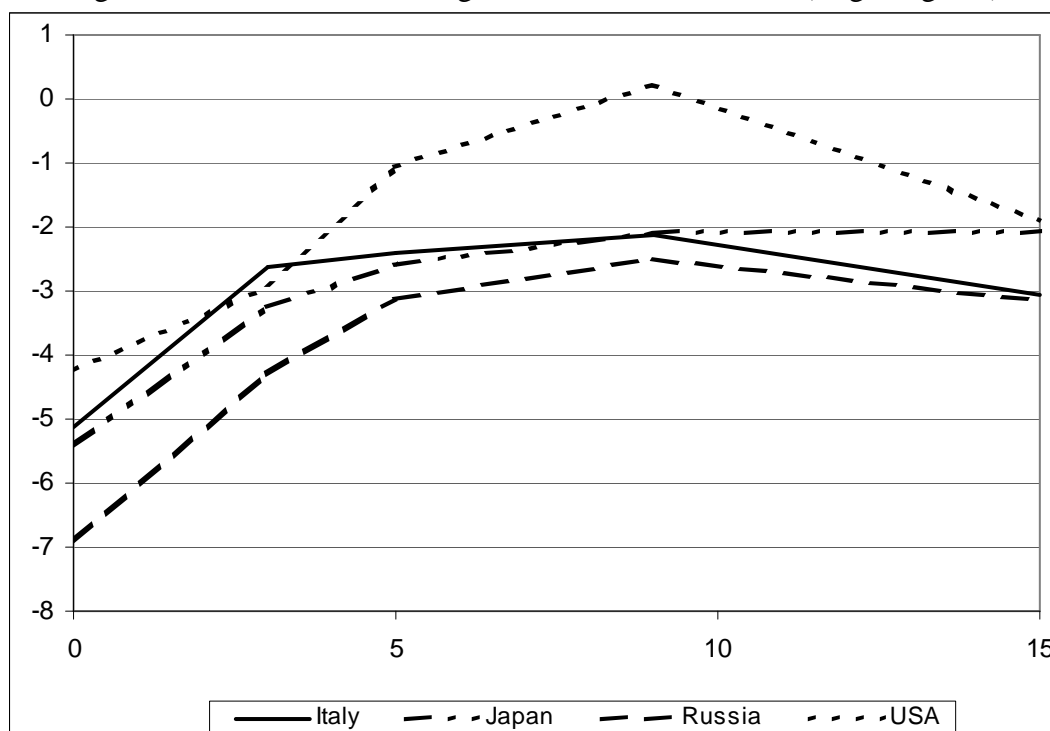
Italian and Russian males have similar baseline hazards. The hazard increases firstly quickly, then slowly until age 18, then it begins to decrease. The hazard for Russian males is the lowest between these four countries.

Hazard for Japan remains steady even after age 18, as Japanese young people have a higher median age at first romantic relationship, higher than 18 years old (Table 1).

The male teens in the USA have a quite different hazard, which is steady and rapidly increasing. Moreover it has a remarkable peak toward age 18. The hazard remains higher even at age 25.

Table 6: baseline hazard for females, models 1F-4F.

Baseline		Italy	Japan	Russia	USA
Age:	10-12 years old	1.04 ***	1.08 ***	1.09 ***	0.60 ***
	13-14 years old	0.37 ***	0.08	0.74 ***	0.90 ***
	15-18 years old	0.05 **	0.30 ***	0.20 ***	0.26 ***
	19-25 years old	-0.20 ***	0.15	-0.17	-0.29 **
Intercept	-	-5.54 ***	-5.61 ***	-7.14 ***	-5.09 ***
Log-likelihood		-9079.15	-1985.04	-2950.11	-2368.75

(Note: * $p<0.1$, ** $p<0.05$, *** $p<0.01$)

Figure 2: baseline hazard for age, females, models 1F-4F (origin: age 10)
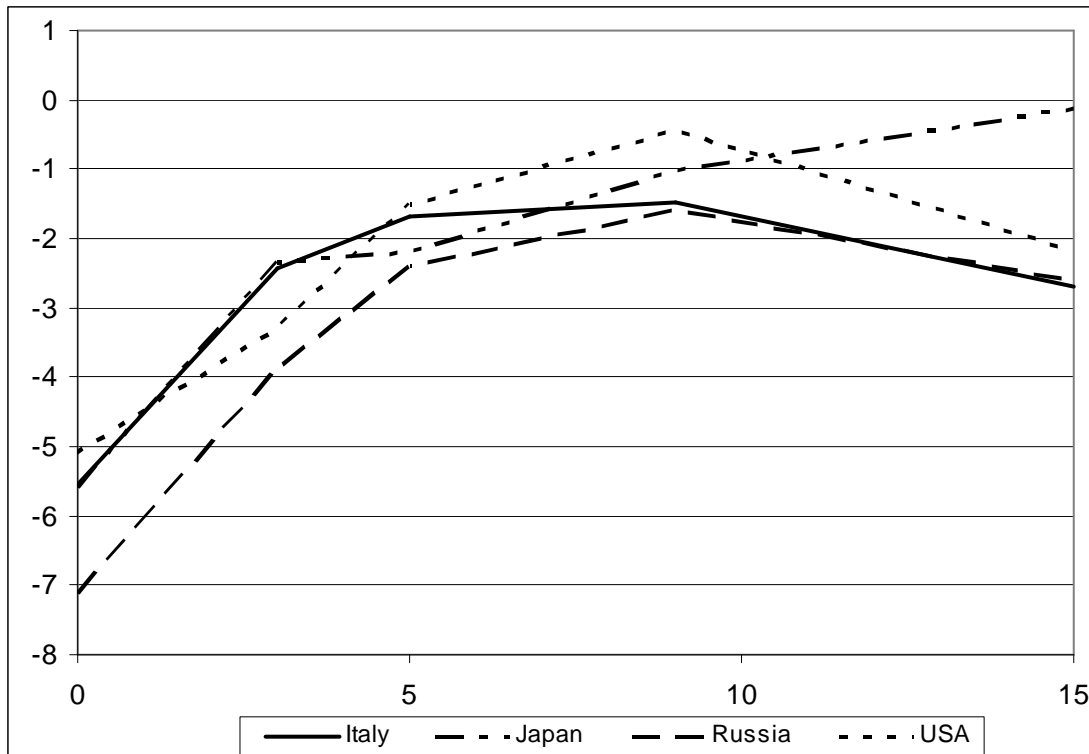
The baseline hazards for females are more similar than the baseline hazards for males in the four analyzed countries. Females have a higher baseline hazard than males. (Compare tables 5 and 6).

Again, the hazard increases until age 18, then decreases. This does not happen for Japan, where, as for males, the hazard still increases after this age. The reason is the same: Japanese young people have a higher median age at first relationship, so the maximum of baseline hazard is not reached.

Russian girls have the lower hazard, while the hazard for Italian girls is steadier, only slightly increasing after age 12 and decreasing after age 18. This is because Italian girls have almost the same probability to enter a relationship throughout adolescence, especially after 12 years old.

The hazard for the USA has a noticeable peak at 18 years old, and then decreases, approaching the hazard for Italy and Russia.

Table 7: covariates, males, models 1M-4M.

Covariates	Relative risks			
	Italy	Japan	Russia	USA
Father not very present or distant	1.00	1.00	1.00	1.00
Father close	1.04	0.92	0.97	1.18
Mother not very present or distant	1.00	1.00	1.00	1.00
Mother close	1.08	1.05	1.37 ***	0.75
Agreed family rules without arguing	0.85 **	0.68 ***	0.85	1.00
Tried to persuade parents to be less strict	1.00	1.00	1.00	1.00
Often fought with parents	0.98	0.85	1.25 **	1.05
Father never or seldom attended religious functions	1.00	1.00	1.00	1.00
Father usually attended religious functions	1.02	1.29	1.24	1.41
Mother never or seldom attended religious functions	1.00	1.00	1.00	1.00
Mother usually attended religious functions	0.95	0.85	1.05	0.79
Respondent never or seldom attended religious functions	1.00	1.00	1.00	1.00
Respondent usually attended religious functions	0.92	0.37	0.84	0.95
Accepted school rules	0.81 ***	0.79	1.08	0.95
Thought that school rules where too strict but did not complained	1.00	1.00	1.00	1.00
Often complained school rules	1.04	1.14	0.94	0.93
Poor school grades	1.00	1.00	1.00	1.00
Good school grades	0.93	1.04	1.03	0.26 **
Respondent not pleased with his physical self appearance	1.00	1.00	1.00	1.00
Respondent pleased with his physical self appearance	1.42 ***	1.45 ***	1.17	1.79 ***
Never practiced a sport activity	1.00	1.00	1.00	1.00
Often practiced a sport activity	1.55 ***	1.93 ***	1.09	1.01
Never smoked	1.00	1.00	1.00	1.00
Sometimes or often smoked	1.48 ***	2.20 ***	1.35 ***	1.15
Never gone night-clubbing	1.00	1.00	1.00	1.00
Sometimes or often going night-clubbing	1.62 ***	1.96 ***	1.87 ***	1.33 **

(Note: *** $p<0.01$, ** $p<0.05$, * $p<0.1$)

The quality of the affective relationship with parents does not result to be significant, with the exception of the positive role of the mother for Russian male adolescents. It is possible that a close relationship with the mother highlights a deeper attachment with the family, otherwise not so common for young males in present-day Russia, and consequently a better aptitude to establish affective relationship.

Obedience to rules set up by parents during adolescence has a negative association with the hazard for Italian and Japanese males. Equally, not respecting rules and fighting with parents has a positive has a positive role for Russian males.

Moreover, obedience to school rules has a significant negative role only for Italy, whereas it is negative but not significant for Japan and the USA. As some other determinants will show, being subjected to familial, school and social control reduces the opportunities of meeting and establishing a romantic relationship with a partner.

Religiosity has not proved to be significant, neither for student nor for parents. Thus, perhaps surprisingly, being more religious does not seem to play a role in the formation of romantic relationships during adolescence.

Perception of one's physical appearance, except for Russia, is one the most noticeable factors in these first four models. Being satisfied with one's appearance thus plays a key role during adolescence. Having a positive self-esteem makes it more likely to start a relationship.

It is difficult to say why self appearance satisfaction is not significant in Russia.

Practicing a sports activity, smoking and going night-clubbing and similar, have all a positive association with the hazard. For Italy and Japan they are all significant, for Russia the sports activity is not significant, for the USA only night-clubbing is significant.

These three factors are related to the possibility of meeting a partner, especially going night-clubbing which, moreover, is significant in all the four different social contexts. Nightclubs are a place where young people meet, where relationships are easier to start, and where many social limits and obstacles to socialization with the opposite sex are absent or less intense.

Smoking and practicing a sports activity can be considered, as said before, a behavior more frequent for adolescents involved in peer groups, and thus an indicator of an active social life.

Italian male adolescents are influenced by more significant factors than all the other countries, while young Americans are the less influenced ones.

Table 8: covariates, females, models 1F-4F.

Covariates	Relative risks			
	Italy	Japan	Russia	USA
Father not very present or distant	1.00	1.00	1.00	1.00
Father close	0.92 *	1.01	0.92	0.89
Mother not very present or distant	1.00	1.00	1.00	1.00
Mother close	1.00	0.95	1.25 **	0.93
Agreed family rules without arguing	0.75 ***	0.60 ***	0.79 **	0.81 **
Tried to persuade parents to be less strict	1.00	1.00	1.00	1.00
Often fought with parents	1.09	0.85	1.09	1.10
Father never or seldom attended religious functions	1.00	1.00	1.00	1.00
Father usually attended religious functions	0.98	1.09	1.04	1.05
Mother never or seldom attended religious functions	1.00	1.00	1.00	1.00
Mother usually attended religious functions	0.96	1.06	0.86	1.02
Respondent never or seldom attended religious functions	1.00	1.00	1.00	1.00
Respondent usually attended religious functions	0.90 **	1.39	1.06	0.94
Accepted school rules	0.96	0.83 *	1.02	0.94
Thought that school rules where too strict but did not complained	1.00	1.00	1.00	1.00
Often complained school rules	1.21 ***	1.09	1.06	1.25
Poor school grades	1.00	1.00	1.00	1.00
Good school grades	1.12 *	1.04	0.99	0.46
Respondent not pleased with his physical appearance	1.00	1.00	1.00	1.00
Respondent pleased with his physical appearance	1.43 ***	1.34 **	1.40 ***	1.82 ***
Never practiced a sport activity	1.00	1.00	1.00	1.00
Often practiced a sport activity	1.24 ***	1.30 **	1.24 **	1.38 **
Never smoked	1.00	1.00	1.00	1.00
Sometimes or often smoked	1.44 ***	1.94 ***	1.17 *	1.51 *
Never gone night-clubbing	1.00	1.00	1.00	1.00
Sometimes or often night-clubbing	1.39 ***	1.83 ***	1.17	1.24 **

(Note: *** $p<0.01$, ** $p<0.05$, * $p<0.1$)

Again, for females too, the quality of the affective relationship with their parents doesn't result to be significant, with two exceptions though. The first exception is the positive role of the mother for Russian female adolescents too – probably for the same reason as the males.

The second exception is the slightly negative role of the father for the Italian female adolescents. This is because, mostly in the southern regions of Italy, less educated fathers are more traditionalist and strict, and adolescent daughters are not allowed to go out unattended by male brothers or relatives. Thus, if a girl accepts the father control, the likelihood for her to meet a possible male partner significantly decreases. This hypothesis is also supported by the variable family rules, which

has a negative association with the hazard for Italian female teens if the control is accepted, positive, even if not significant, if it is refused.

Obedience to rules set up by parents during adolescence has a similar negative role for the girls in all other countries, and particularly in Japan.

Both students' and parents' religiosity is insignificant for females too. There is only one noticeable exception: Italy, where Catholicism is prevalent. For this reason, it may be that young girls, who are more involved in the principles of Catholicism, attending mass and/or religious groups, may find it difficult to meet a male partner (in Italy males are usually less religious than females) who shares the same values and accepts to delay sexual intercourse. Therefore they are less likely to enter a romantic relationship.

Obedience to school rules has a significant negative role only for Japan, negative but not significant for Italy and the USA. Conversely, rebelling against school rules has a positive role for Italian girls.

Physical appearance is a remarkable determinant for females too. It is positively associated with the hazard. The same can be said for practicing sports activities. It can be a good proxy not only for self esteem but also for physical appearance: after all, good-looking boys and girls often are more likely to find a partner. Sport often helps to raise self-esteem and self-confidence. Particularly, team sports help to make new acquaintances, with members of the opposite sex too.

Smoking is positively associated with the hazard, even if only slightly significantly for Russia and USA. Going night-clubbing and smoking have a noteworthy positive association with the hazard for Japanese females. Girls that are less traditionalist are also the most likely to start a couple relationship.

Girls seem to be subjected almost to the same cultural background and to behave in a similar manner in all the four countries. The factors influencing their attitude toward relationships are more similar than the ones influencing the male adolescents' attitudes in the same countries.

5. An in depth model for Italy

Nearly 5,000 first and second year university students enrolled in the selected 23 Italian faculties of Economics and Statistics participated in this survey.

The respondents were unmarried females (58.3%) and males aged between 18 and 26 years old (the median age was about 20.5). 65% of them were residing in the North-Centre of Italy, almost all of them living with the parents during adolescence.

Hence, this Italian larger sample allows for an in depth exploration of adolescent behavior. For this reason a further model will be estimated using Italian data, firstly without and then with unobserved heterogeneity. These two models will include some additional variables, described in paragraph 3.3, in order to test the role of some specific hypotheses.

The results of these two models will be presented in the next paragraph. Now, let's briefly present romantic relationships in Italy.

5.1 Romantic relationships in Italy

Young people in Western Countries share a delay in "definitive" choices on their future and assumption of responsibility. They tend to postpone the events that traditionally represent the transition to adulthood. (Cavalli, 1996; Kohler et al., 2002). The traditional Mediterranean culture, in which Italian young people are embedded, makes this delay more intense. (Billari et al., 2002).

In the last thirty years Italy has been characterized by an impressive decline in fertility. TFT decreased from 2.4 in 1970 to 1.2 in 2000, while the fertility rate for women aged 20-24 reached the value of 36.3 in 1995, (it was 130.9 in 1970).

Mean age at first marriage, that was 27.0 for males and 23.7 for females in 1975, increased to 30.5 years old for males and 27.6 for females in 2000, (ISTAT, 2002), as did the mean age at first child

for women, and the number of couples having no children or only one child did. (Barbagli and Saraceno, 1997). Finally, the proportion of non marital cohabitation augmented, but not very much. As a result, Italy has a zero population growth, and, therefore, is under the replacement level. According to the 2003 population projection by ISTAT Italians will be 52 millions in 2050 (they were 57 millions in 2000).

As recently showed (Garelli, 1984; Buzzi et al., 1997), Italian young people are characterized by a sense of insecurity toward their future also due to the uncertainty of the Italian social context in the '80s and '90s, (e. g. the high unemployment rate in the South, the increasing number of precarious jobs in the North).

Italian young adults delay their exit from the parental family, thus postponing their own family onset. (Buzzi, 1998). The fourth IARD survey (1997) on young people shows that 59% of the males and 44% females still live with their parents at 30 years old. (Buzzi et al., 1997).

This delay distinguishes even the couple relationships during adolescence: the median age at the first one is still low, about 16 years old, but they are no more meant to precede marriage, as it was until the sixties, instead they are lived to experiment closer relationship with the opposite sex, especially for males (Buzzi, 1997). This is consistent with the results of some US surveys. Tang and Zuo, 2000, show as only very few American students think that the major purpose of dating is to find a marital partner.

The change is astonishing, if you think that in Italy until the second world war, and after, it was unacceptable that a young woman visited her future husband, even if his parents were present, while a young man was allowed to visit her future wife only in certain days and hours, and if they went out together to mass or to walk, one or more relatives of them have to be present (Barbagli, 1984). There were no young couples kissing in streets or gardens, no groups of boys and girls dating.

In some case, especially for the upper classes, the partners met only a few times before the marriage, and, anyway, it was common sense that love can, and have to, grow up after marriage.

The same world «boyfriend» was unusual until the beginning of the XX century. You were betrothed to someone you were going to marry, you have not a couple relationship with someone you like until it goes well. (Beer et al., 1996).

Nevertheless, the gender differences are still remarkable: girls live a couple as exclusive and reciprocally faithful. They are more exigent than their male counterparts, and base the relationship on the reciprocal understanding and on the capacity to communicate. At the contrary, boys often conceive a couple relationship as a way to enlarge their life experiences, also sexual, and to follow the example of their contemporary. (Buzzi, 1997).

These differences are similar in the USA: females are more concerned with commitment and caring, and less with sexual intimacy where males expect it sooner (Roche and Ramsbey, 1993). Females also have significantly less partners than males (Tang and Zuo, 2000).

Moreover, while in the majority of western countries the age at first intercourse has continuously decreased, Italy has not followed this path: the proportion of non virgin girls at the 16th birthday is two times more in France and in Great Britain and four times more in the United States than in Italy. (Bozon and Leridon, 1996 for France; Wellings et al., 1994 for United Kingdom; Laumann et al., 1994 for USA).

However, in Italy the proportion of young people who experienced their first romantic relationship is, surprisingly, not very different from other western countries. The Italians' late age at first intercourse is due to a longer period of time elapsing between the beginning of the relationship and the first sexual intercourse. (Denissenko et al., 1999).

For this same sample, the median period of time between the beginning of the relationship and the first intercourse is 20 months, when one of the two partners is a virgin. (Dalla Zuanna and Mencarini, 2003).

5.3 Results for models 5 and 6

In model 5, the hazard of entering in the first couple relationship for Italian teenagers was estimated without including any unobserved heterogeneity. This is included in model 6.
The results of these models are presented in tables 9 (baseline hazard), 10-11 (relative risk for covariates), while in figure 3 and 4 the baseline hazard y(t) is plotted, respectively for males and females.

Table 9: baselines, models 5 and 6.

| Baseline		Model 5M	Model 6M	Model 5F	Model 6F
Age:	10-11 years old	0.74 *	0.73	0.83 *	0.83 *
	11-12 years old	0.86 ***	0.90 ***	1.07 ***	1.07 ***
	13-14 years old	0.12 **	0.17 **	0.38 ***	0.40 ***
	15-18 years old	0.08 ***	0.15 ***	0.05 **	0.06 *
	19-22 years old	-0.11	-0.03	-0.15 **	-0.14 *
	23-25 years old	-0.51	-0.45	-0.82	-0.82
Intercept	-	-3.73 ***	-3.90 ***	-4.37 ***	-4.40 ***
Log-likelihood		-5802.15	-5799.19	-9025.30	-9024.07

(Note: * p<0.1, ** p<0.05, *** p<0.01)

Figure 3: baseline hazard for age, males, models 5M-6M (origin: age 10)
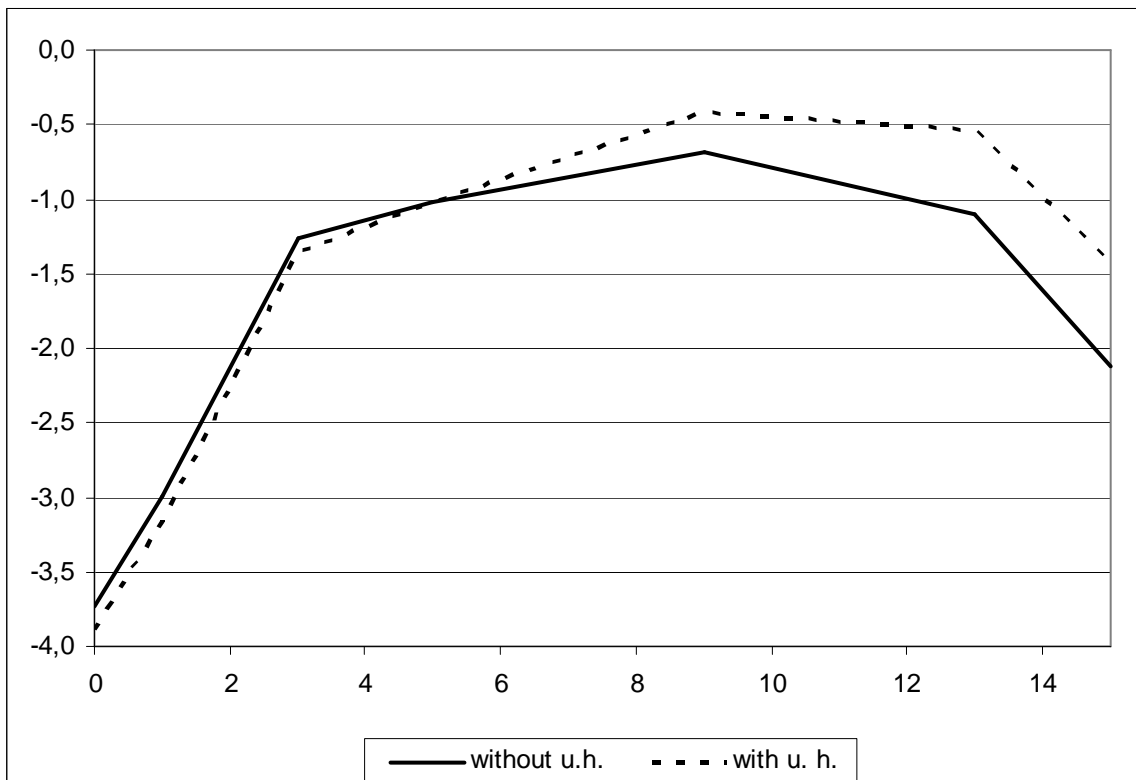
The hazard increases suddenly until age 13; afterward it increases steadily until age 19. Then it starts to decrease, slowly at first until age 23, and then quickly. However it is still higher than age 12.
Adding unobserved heterogeneity, changes the hazard, that, after age 18, becomes remarkably higher than without unobserved heterogeneity.

Figure 4: baseline hazard for age, females, models 5F-6F (origin: age 10)
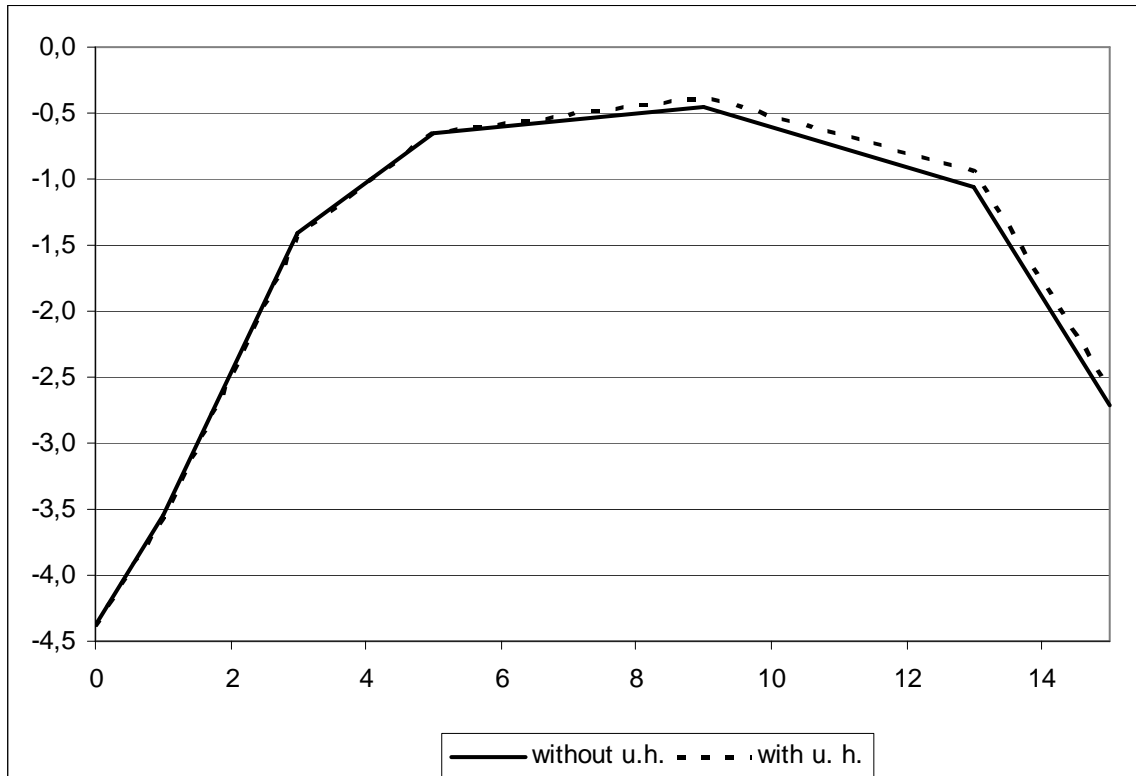
The baseline hazard for female adolescents is not very different than the males' one. Girls have a higher hazard between the ages of 14 and 22. Adding unobserved heterogeneity does not change much the baseline. Indeed, it will be showed later that unobserved heterogeneity proved to be significant only for Italian male adolescents.

Table 10: covariates (1), models 5 and 6.

Covariates	Relative risks			
	Model 5M	Model 6M	Model 5F	Model 6F
Father not very present	0.88	0.88	0.94	0.94
Father distant	1.00	1.00	1.00	1.00
Father close	0.98	0.99	0.92	0.91
Mother not very present	1.16	1.20	0.93	0.93
Mother distant	1.00	1.00	1.00	1.00
Mother close	1.03	1.08	0.96	0.96
Agreed family rules without arguing	0.93	0.89	0.76 ***	0.76 ***
Tried to persuade parents to be less strict	1.00	1.00	1.00	1.00
Often fought with parents	0.98	0.96	1.09	1.09
Father never attended religious functions	0.67 ***	0.64 ***	0.94	0.95
Father sometimes attended religious functions	0.74 **	0.73 **	0.91	0.91
Father attended religious functions once a month	1.00	1.00	1.00	1.00
Father attended religious functions every week	0.76 **	0.74 *	0.92	0.92
Mother never attended religious functions	1.33 *	1.39 *	1.12	1.13
Mother sometimes attended religious functions	1.27 *	1.31 *	1.11	1.10
Mother attended religious functions once a month	1.00	1.00	1.00	1.00
Mother attended religious functions every week	1.11	1.14	1.07	1.06
Respondent never attended religious functions	0.95	0.96	0.94	0.94
Respondent sometimes attended religious functions	1.00	1.00	1.00	1.00

Respondent attended religious functions once a month	0.96	0.93	0.98	0.98
Respondent attended religious functions two or three times a month	0.94	0.93	0.95	0.94
Respondent attended religious functions every week	0.89	0.88	0.88 *	0.88 *
Accepted school rules	0.82 ***	0.77 ***	0.96	0.96
Thought that school rules where too strict but did not complained	1.00	1.00	1.00	1.00
Often complained school rules	1.03	1.07	1.21 ***	1.23 ***
Poor school performance	1.01	1.02	0.88 *	0.89
Good school performance	1.00	1.00	1.00	1.00
Very good school performance	0.89 *	0.86 *	0.96	0.96
Respondent not pleased with his physical appearance	0.61 ***	0.56 ***	0.59 ***	0.59 ***
Respondent not really pleased with his physical appearance	0.82 ***	0.80 ***	0.76 ***	0.75 ***
Respondent quite pleased with his physical appearance	1.00	1.00	1.00	1.00
Respondent very pleased of his physical self appearance	1.07	1.11	0.98	0.99
Never practiced sport activity	0.79 *	0.77 *	0.89 *	0.89 *
Sometimes practiced sport activity	1.00	1.00	1.00	1.00
Often practiced sport activity	1.30 ***	1.33 ***	1.12 **	1.13 **
Never smoked	0.69 ***	0.67 ***	0.72 ***	0.72 ***
Sometimes smoked	1.00	1.00	1.00	1.00
Often smoked	0.99	1.04	0.76	0.78
Never gone night-clubbing	1.00	1.00	1.00	1.00
Sometimes or often attended to disco	1.43 ***	1.47 ***	1.35 ***	1.35 ***

(Note: * p<0.1, ** p<0.05, *** p<0.01)

Table 11: covariates (2), models 5 and 6.

Covariates	Relative risks			
	Model 5M	Model 6M	Model 5F	Model 6F
Living in the North-Centre of Italy during high school	1.00	1.00	1.00	1.00
Living in the South of Italy during high school	1.06	1.09	1.02	1.02
Living abroad during high school	0.96	0.80	0.57 ***	0.61 ***
No elder brother or sister	1.00	1.00	1.00	1.00
Only elder sister	1.03	1.07	0.90 *	0.89 *
Only elder brother	1.07	1.08	0.94	0.93
Both of them	0.92	0.90	1.00	1.00
Father's age: 30-40	1.00	1.00	1.00	1.00
Father's age: 40-50	0.78 **	0.79 *	0.90	0.90
Father's age: 50 or more	0.71 **	0.70 **	0.88	0.88
Father deceased	0.59	0.50 *	1.27	1.28
Mother's age: 30-40	1.00	1.00	1.00	1.00
Mother's age: 40-50	1.08	1.08	1.00	0.99
Mother's age: 50 or more	1.19	1.22	1.03	1.02
Mother deceased	0.85	0.92	0.62	0.61
Never suffered from serious eating problems	1.00	1.00	1.00	1.00
Suffered from serious eating problems during adolescence	1.01	1.02	1.18 ***	1.19 ***
Never suffered from insomnia	1.00	1.00	1.00	1.00
Suffered from insomnia during adolescence	0.82	0.76 *	0.94	0.95
Never suffered from serious sight or hearing difficulties	1.00	1.00	1.00	1.00
Suffered from serious sight or hearing difficulties during adolescence	0.78 **	0.74 **	0.90	0.89
Never suffered from heavy sweating on the palms of the hand	1.00	1.00	1.00	1.00
Suffered from heavy sweating on the palms of the hand during adolescence	0.91	0.89	0.90 *	0.90

Never attended a religious groups	0.82 ***	0.80 ***	1.06	1.07
Sometimes attended a religious groups	1.00	1.00	1.00	1.00
Often attended a religious groups	0.94	0.91	1.02	1.02
Parents never allowed arriving late on Saturday nights	0.76 **	0.71 **	1.02	1.02
Parents sometimes allowed arriving late on Saturday nights	1.00	1.00	1.00	1.00
Parents often allowed arriving late on Saturday nights	1.10	1.14 *	1.12 **	1.13 **
Never got drunk	1.00	1.00	1.00	1.00
Sometimes or often got drunk	1.34 ***	1.40 ***	1.33 ***	1.35 ***

(Note: * p<0.1, ** p<0.05, *** p<0.01)

The geographical area in which an adolescent mainly lived while attending high school does not influence this hazard, except for the small number of girls who lived abroad. It is surprising that in our analysis geographical differences, usually a major determinant in social and demographical behavior in Italy, have no significance, at lest by the means of their direct influence. Nevertheless, it may be that in the more conservative and religious southern part of Italy girls are encouraged to find a partner to get married. Hence, this factor counterweights the low age at first relationship in the less traditionalist northern part of Italy.

For both male and female adolescents, the relationship with parents has no significant part in determining the hazard. However, for female adolescents accepting the rules parents set up without arguing significantly reduces the hazard. Therefore, it seems that for young Italian males, the relationship with parents does not play a key role in their behavior towards romantic relationships. Instead, family control has a noteworthy role for girls. In southern Italy especially, this could be determined by the traditional view of the sex roles, where male and female adolescents have different possibilities to interact with the opposite sex. (Dalla Zuanna and Mencarini, 2003).

When parents do not allow their children to stay out late on Saturday nights, these adolescents have fewer opportunities to join peer groups, to familiarize with young people of the opposite sex, and to take part in their life. Consequently, the hazard for these adolescents is lower, and, conversely, higher for adolescents who are allowed to stay out late.

The presence of elder siblings does not have a significant role, and neither the mother's age. Instead, older fathers are negatively associated with the hazard. The reason of this association may be that, being older, they are more traditionalist and less talkative. Therefore, it is likely that their adolescent sons are less likely to start a relationship, having fewer possibilities to meet a partner.

For boys, while having a not religious father reduces the hazard, a not at all, or a little religious mother increases the likelihood to have a partner. Perhaps, this is because these mothers are more permissive toward their male adolescent sons. These two variables are not significant for females.

Both male and female adolescents who often attend religious functions have a lower risk of entering a couple relationship, even if it is slightly significant for females and not significant for males. Finally, not attending religious groups reduces the hazard to have a relationship for male adolescents. Religious groups have become gender mixed in last decades, and they are a place where young males are more likely to find a partner. It is not so for female adolescents because, probably, the rules applying to them may be even stricter, and thus less favorable to the formation of relationships. Besides, the number of females attending religious groups is usually larger than the number of males (Table 12). Thus, for these males it can be much easier to find a partner.

Table 12: percentage of Italian respondents attending to religious groups at different ages.

	11-13	14-15	16-18	At the interview
males	45.2	35.7	24.6	14.5
females	47.2	45.5	34.6	22.4
difference	- 2.0	- 9.8	- 10.0	- 7.9
N	4765	4765	4765	4754

As already said, family control has a significant role only for females. Instead, the acceptance, or the refusal, of the rules set up by the school influences both male and female adolescents. As expected, an accepted form of control significantly reduces the hazard of starting a relationship. Italian high schools are not particularly sexist, nevertheless, it cannot be said that teachers encourage relationships. It can also be that the teens that accept the teacher's control are more compliant and submissive, thus being less likely to be attracted by the partnership market.

It is also noticeable that the best male students have a lower risk, as known in relevant literature. (Tucker et. al., 2000). Thus, it may be that students that consider success in school as their main goal, are less interested in other aspects of adolescent life, such as couple relationships, or sport, both highly time consuming.

Satisfaction with one's physical appearance, (which is a time varying variable, even if it slowly changes), is confirmed as a main factor. Either being a physically less attractive adolescent, or thinking to be so, makes a less attractive partner on the partnership market. Serious sight or hearing difficulties during adolescence also reduces the hazard, but it is significant only for males.

Eating problems (anorexia and bulimia) are negatively associated with the hazard for girls. It is known that this sort of health disease is related to early dating behavior and sexual experiences (Kaltiala-Heino, 2001, Caltabiano, 2002). Therefore, it might also be related to affective disorder, which leads toward many short and unsuccessful relationships. Further studies are necessary to fully understand this particular relation.

Sports activity, and night-clubbing seem to have a similar role: both male and female adolescents that are popular and that are involved in many activities are the most likely to find and attract a partner.

Smoking and drinking have also a similar positive role. This kind of behavior is more likely to be practiced in peer groups, often of the same sex. Its correlation with an early onset of sexual intercourse is well known (see for instance Kraft, 1989, and Sen, 2002). It can have a similar role for the first couple relationship.

Another reason could be that, in Italy, most girls do not have their first intercourse outside a couple relationship. Therefore, male adolescents have to enter a relationship to have their first sexual intercourse.

Unobserved heterogeneity turned out to be significant only for males (Table 13).

Table 13: unobserved heterogeneity.

Unobserved heterogeneity	Model 6A (males)	Model 6B (females)
Sigma	0.5949 ***	0.2367

It may be that for females the most relevant determinants of entrance in romantic relationships were included in the model. However, the most probable explanation is that the heterogeneity is not normally distributed, as it was supposed in this model. A further analysis certainly will enlighten this aspect.

For males, on the contrary, it proved to be significant. Therefore, there should be some factors that there were not included in the model. Young males' behaviors seems to be more differentiated, and subject to more factors, than females. Some of these factors can be, perhaps, psychological and emotive ones: in Italy (and perhaps in some others Western Countries) young males are not at ease with the changing female role of their female contemporary. Female adolescents are becoming more and more extrovert, less constrained by tradition. They are even more precocious than males (in samples used in this work, the median age at first couple relationship is six month lower, the median age at first intercourse is only 0.3 month higher), sometimes proposing to have intercourse rather than letting the male partner take the initiative. These factors should be further investigated so as to asses their influence on adolescents' behavior.

6. Final remarks

In the first part of this paper, we have described the foremost characteristics related to friendship, affective and sexual behavior of the adolescents of several countries.

Japanese teens usually are characterized by single sex friendships, thus having the highest median ages at first relationship and at first intercourse. Conversely, Italian teens, even if they very often have mixed sex friendships, have a delayed median age at first intercourse, if compared to the one at first relationship. Both in Russia and in the USA, male and female adolescents have different behavior: more than 70% of the males have their first intercourse outside a couple relationship, while for females this percentage is about 40%. Moreover in the USA the age at first intercourse is very low if compared to the other countries here analyzed, and the difference with the age at first relationship is negative for both sexes.

We have also described the possible causal factors of the entrance into a couple relationship for Italian, Japanese, Russian, and American adolescents. Age, night-clubbing, physical appearance and sports activity proved to be the most significant ones for males; whereas age, physical appearance, sports activity, and rebelling against family rules proved to be the most significant ones for females. Therefore, it is evident that it is the whole context in which a teenager lives (family, friends, school, and free time) that shapes both his attitudes towards couple relationship and the possibilities to entering one.

Most of the determinants, such as physical appearance and sport, are the same for all the four countries. These findings can support the hypothesis of cultural convergence in romantic relationships customs in the Western Countries. In these countries, young people, both males and females, are subjected to more or less the same social context and react almost in the same way. Mass media (newspapers, magazines, television, advertisement), entrainment (music, cinema, fashion), and technology play a key role in this process. Today, the same products are sold in the shops of New York and Tokyo, Moscow and Sydney. Young people watch the same films, read the same books, and listen to the same singers. They surf the World Wide Web, which reduces the distances between countries, continents and cultures.

Nevertheless, some factors remain peculiar to single countries: religion in Italy, being more subjected to social control in Japan, risk behavior in Russia, and school performance in the USA. Resistance to cultural changes is still strong. Although Western countries are becoming more similar, they are not identical.

A more enlarged set of factors has been here studied only for Italian adolescents, taking into consideration also the presence of unobserved heterogeneity. Age, social control, religiosity of both the adolescent and his parents, sport activity, night-clubbing some risk behaviors, and physical appearance proved to be the most significant ones.

However, some variables in the model have not resulted to be significant: the geographical area, closeness to parents, and mother's age. Since the unobserved heterogeneity resulted to be very low, this analysis also shows that the selected variables can grasp the main determinants of age differences in entering the first romantic relationship.

This more complex model verify again the hypothesis that it is the whole context in which a teenager lives that influences the likelihood of starting a relationship, both for males and females.

The characteristics of the respondents, who never had a romantic relationship, have also been described. These are generally closer and shyer young people. They often have strict parents, and are not satisfied with their physical appearance. They often are very religious, brilliant at school, respectful of rules set by parents and by the school, and they never engage in risky behavior.

As a result, in Italy, as in the other three countries here examined, an early approach toward the other sex is strongly related to a lifestyle that is less traditional and more oriented toward the *jeux de vivre*.

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