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# Higher Parental Socioeconomic Status Accelerates Sexual Debut in Italy

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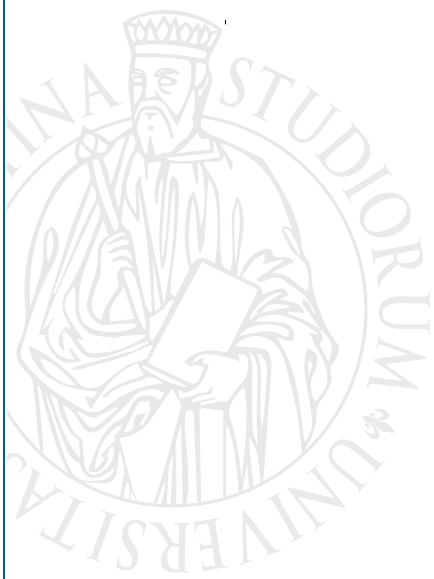

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# Higher Parental Socioeconomic Status Accelerates Sexual Debut in Italy

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## Abstract

The onset of the transition to adulthood starts with first sexual experiences. In this paper we analyzed how Italian university students' timing and type (protected or unprotected) of sexual debut are influenced by parental socioeconomic status. By applying event-history techniques to unique data from the two releases of the Sexual and Emotional Life of Youths survey (2000 and 2017), we found a clear accelerating effect of higher parental socioeconomic status on the sexual debut of their children. These results hold controlling for Second Demographic Transition-related characteristics of the family of origin. Our results contradict the well-established, North American- and Anglo-Saxon-driven finding that children with higher parental socioeconomic status postpone their sexual debut. We argue and prove that the overall positive effect of parental socioeconomic status on children's risk of sexual debut in Italy is due to the limited diffusion of unprotected sexual relations during adolescence and young adulthood compared to North American and other Anglo-Saxon settings.

**Keywords:** Social origins; Parental SES; Sexuaity; Sexual debut; Second Demographic Transition; Italy

## Introduction

The life course perspective posits that experiences at one stage of life will have an impact on later stages of life (Elder 1994; Bernardi, Huinink, and Settersten 2019), suggesting that the onset of the transition to adulthood starts with first sexual experiences (James-Hawkins 2019). The sexual debut, in particular, represents a life-changing event that looms large in the memories and lives of teenagers (Elder 1994; Brown 1999; Giordano, Longmore, and Manning 2006) and can have profound direct and indirect influences on later family life courses (Manning, Giordano, and Longmore 2008). The timing of first sexual intercourse affects the first stages of the process of building one's own relational and social identity (Carpenter 2001, 2002, 2010), particularly in relation to increasing independence, responsibility, and the management of at-risk behaviors (Rosina 2004; Manning, Giordano, and Longmore 2008; Manning 2019). In this paper, we focus on the role that the family of origin plays for children's timing and type (protected or unprotected) of sexual debut. Parents express both explicit and implicit messages about sexuality to their children (Mollborn 2017), and while norms about sexuality can vary in relation to changing social networks (James-Hawkins 2019), parents continue to have a large influence on their offspring's sexuality (Dalla Zuanna and Mancin 2004). We consider a fundamental dimension defining social origins: parental socioeconomic status (SES), i.e., parental education and social class.

Higher parental SES is usually interpreted in the light of the better behavioral monitoring exerted by high-status parents, who are more capable of preventing their children's risky sexual behavior, such as an early and *unprotected* first intercourse. Indeed, the literature offers robust, clear-cut evidence for such a "parental control" mechanism: higher levels of parental education and social class have been found to be associated with children's later sexual debut in several empirical studies, mostly concerning the US or Anglo-Saxon European contexts—see, e.g., Miller (2002) for a literature review concerning the US; for the UK, see Wellings et al. (2001) and Wight, Williamson, and Henderson (2006).

Building from this standpoint, we add that another explanation might also be relevant, which we labelled as the "cultural openness" mechanism. High-SES parents hold more liberal attitudes toward sexual and family life. Highly educated and high-class parents may, thus, not only exert higher behavior control on their children, but they may also be more open toward their children's sexuality and have better communication with them about sex, which could translate into earlier, but *protected*, sexual intercourse for their offspring. Depending on whether the "parental control" or "cultural openness" mechanism prevails, one could find a postponing or an anticipating effect of higher parental SES on children's timing of sexual debut.

Whether the "parental control" or "cultural openness" mechanism prevails is likely, we posit here, to depend on the social context. In this paper, we analyze the role of the family of origin in shaping children's sexual debut in Italy. Differently from US and other Anglo-Saxon contexts, teenage childbirths are extremely rare in Italy, and later sexual debut has a normative status, also due to the influence of the Catholic Church (Barbagli, Dalla Zuanna, and Garelli 2010; Garelli 2011). In addition, the role of parental normative pressures on children's decisions concerning family and sexual life is likely to be especially important in Italy due to the strength of family ties and obligations (Vignoli and Salvini 2014; Guetto et al. 2016). In this context, we hypothesize that the "cultural openness" mechanism may gain the upper hand over the "parental control" mechanism, so that higher parental SES could accelerate the timing of first sexual intercourse, contrary to the prevailing results in the North American literature.

We outline such an approach by using unique data from two large-scale samples of undergraduate university students stemming from the Sexual and Emotional Life of Youths survey (SELFY, 2000, 2017), a self-completed questionnaire filled out in the classroom during a lecture (Billari, Caltabiano, and Dalla Zuanna 2007; Dalla Zuanna et al. 2019). Clearly, our sample is not representative of the population of young Italians as a whole. The sexuality of our sample of university students seems to be delayed and to be less intense than that of their less educated peers (Dalla Zuanna et al. 2019). Nonetheless, university students are known for a great heterogeneity with regard to sexual behaviors, making them very suitable for this kind of investigations (see, e.g., Billari et al. 2007; Stinson 2010). Also, the SELFY data allowed us to operationalize the mechanisms potentially underlying the effects of parental SES, such as indicators of the quality of parent-child relations, the level of communication about sex, and parental permissiveness, as well as to distinguish whether first sexual intercourse occurred in a protected or unprotected manner.

The paper is organized as follows. We first discuss the nexus between social origins and timing of sexual debut, paying special attention to different types of sexual intercourse (protected versus unprotected); then, we advance specific research hypotheses for the Italian context. The

methodological section follows, in which data, variables and the event-history models implemented are presented. We continue by presenting our empirical findings and conclude the paper with a final discussion.

## 1. Background

### *1.1 Social origins and timing of sexual debut*

In Western European countries, parental education and social class have been found to influence a postponement of family decisions, from union formation (see, e.g., Mooyaart and Liefbroer 2016; Brons, Liefbroer, and Ganzeboom 2017) to fertility choices (see, e.g., Rijken and Liefbroer 2009). However, much of the available empirical evidence on the association between parental SES and children's sexual behavior focuses on the US and shows that higher parental education and income correspond to a lower probability of adolescents' having had sexual intercourse (Santelli et al. 2000; Miller 2002; Pearson et al. 2006). An earlier sexual debut is associated with higher risks of unplanned pregnancies and sexually transmitted infections (Atkins and Hart 2008), and a lack of parental supervision and control has been identified among the most important predictors of earlier sexual debut (Miller 2002). Thus, one of the reasons why a higher parental SES could be associated with a postponement of children's sexual debut can be traced back to more effective behavioral monitoring (Wellings et al. 2001; Miller 2002; Wight, Williamson, and Henderson 2006), as it is well-known that more educated parents devote more time to their children (Dotti Sani and Treas 2016). In addition, parents desire to avoid downward social class mobility for their children, a desire that is stronger than that of pursuing upward mobility (Breen and Goldthorpe 2007). Better behavioral monitoring by higher-status parents may thus also aim at discouraging behaviors that might put their children's school performance and career at risk. Among other things, teenage childbearing has long-term detrimental consequences for educational attainment (Kane et al. 2013), reducing children's chances to reach the same social class of their parents.

Higher parental SES may theoretically have an opposite effect, however. An alternative mechanism potentially implying an anticipation of children's timing of sexual debut is related to the possible "emancipatory" effects of higher status attainment. The highly educated tend to have more liberal sexual attitudes (Treas 2002), and value orientations concerning sexual and family life are transmitted from one generation to the next (Vollebergh, Iedema, and Raaijmakers 2001). We do not claim that parental SES has a *causal* effect on those values; it may well be that individuals attend higher education for reasons that also correlate with more open attitudes toward the sexual life. We see parental education and social class as proxies of a more open attitude toward sex. More educated and higher-status parents may thus be more "open" toward their children's sexuality and less likely to perceive their children's sexual life as a taboo subject. In terms of parenting practices, highly educated parents may not only exert more effective behavioral control, but also have better communication about sexuality with their children.

### *1.2 Understanding the mechanisms: parenting practices and children's timing and type of sexual debut*

Much of the existing research on the role of the family of origin for children's timing and type of sexual debut has focused on parenting practices such as parent-child communication about sex,

parental caring and control, and relationship quality. In general, results about parent-child communication are mixed, while higher parental caring and monitoring, as well as higher quality of parent-child relationships, seem to be related to a postponement of sexual intercourse.

In their review of the empirical research on parent-child communication about sex carried out during the 1980s and 90s, Diiorio, Pluhar, and Belcher (2003) illustrate that most studies found parent-teen communication about sexuality to either delay the onset of sexual intercourse among adolescents or not to have any significant effect. Some studies did find communication about sex to be associated with an earlier sexual debut (Davis and Friel 2001; Pearson, Muller, and Frisco 2006), but results seem to be contingent on parental values and the gender of the child (Diiorio, Pluhar, and Belcher 2003). By making use of panel data, Pearson, Muller, and Frisco (2006) analyzed the effects of several parenting practices in the US. They showed that when children have positive relationships with their parents, share mealtimes, and participate in shared activities, they are less likely to initiate sex; on the contrary, communication about sex is related to a higher likelihood to initiate sex, but mostly among girls and non-Latino/a white adolescents.

The delaying effects of parental monitoring have been suggested in several studies (see, e.g., Meschke and Silbereisen 1997), and the extent of parental control and supervision has been found to be a crucial mediator of the effects of the type of family arrangement children have been exposed to during childhood and adolescence (Miller 2002). Children who experienced parental break-up following separation or divorce are more likely to develop a weaker relation with the noncustodial parent, which is usually the father, and to feel less normatively bound by parental expectations about their sexual and family choices (Amato 1993, 2000). As it is traditionally the father who serves as the figure of authority, setting the child-rearing norms and ensuring compliance with them (Booth and Amato 1994), children of divorced parents are exposed to a weaker control (Thornton 1991). The parental monitoring might be weaker not only because of the absence of the father, but also because the mother is more likely to work and be less present (Calhoun and Friel 2001).

The effects of parent-child communication and parental monitoring may differ when focusing also on the type, and not only on the timing, of first sexual intercourse. For instance, Parkes et al. (2011) show that if parents support the autonomy of their children, encouraging them to have sexual intercourse only within stable relationships, this brings about several benefits in their sexual life, like a more common use of condoms. Thus, mixed results concerning communication about sex may be due to opposing effects: a delaying effect on the likelihood of experiencing unprotected sex, and an accelerating effect on the likelihood of experiencing protected sex. The same may hold true for parental monitoring: the results of a meta-analysis taking into account all studies carried out between 1984 and 2014 suggest that parental supervision is associated with both delayed sexual intercourse and greater condom use (Dittus et al. 2015). The focus on the type of first sexual intercourse (protected vs. unprotected) may also help reconcile ambiguous expectations concerning the effect of parental SES on the timing of their offspring's sexual debut. We could surmise that higher parental SES may facilitate a postponement of *unprotected* sexual intercourse. In other terms, higher parental education and social class may be associated with better parent-child communication regarding sexuality, which should then be associated with a higher likelihood of *protected* first sexual intercourse—and especially of condom use—even if more precocious.

The bulk of empirical studies considered so far concerns the US, where teenage births are much more common compared with other Western countries (Singh, Darroch, and Frost 2001; UNICEF 2001), and especially compared with Italy, where they are virtually non-existent. In the next paragraph, how this and other features of the Italian society may moderate the role of the family of origin for children's timing of sexual debut will be discussed.

*1.3 The role of the family of origin for children's sexual debut in Italy*

Italy offers an interesting, largely unexplored case study to test the role of parental SES on the timing of youths' sexual debut. It has been shown that in a country characterized by "strong family ties" (Reher 1998), children are more likely to feel parental pressure on family decisions (Di Giulio and Rosina 2007; Salvini and Vignoli 2014; Guetto et al. 2016), first of all because of the longer permanence in the family of origin and the latest-late age at leaving home (Billari 2004; Billari and Rosina 2004). The Italian latest-late transition to adulthood cannot be attributable solely to the labor market and housing difficulties (Vignoli, Rinesi, and Mussino 2013; Vignoli, Tocchioni, and Mattei 2019), but also to a culturally-rooted behavior, the so called "postponement syndrome" (Livi-Bacci 2001). Families in Southern Europe are characterized by strong intergenerational ties, which entail considerable psychological and material solidarity (Reher 1998; Dalla Zuanna and Micheli 2004) that contributes to reinforcing Italy's latest-late transition to adulthood, including a later sexual debut. Billari and Ongaro argued that "*the functioning rules of the first stages of the process of union formation and sexual experience continue to be rooted in tradition*" (2004: 124).

The delay in union formation and sexual debut in Italy are the results both of the influence of the Catholic Church and of the already mentioned strength of intergenerational bonds. The Catholic Church has maintained a strong presence in the socialization of young people, and this is more marked in Italy compared to other European contexts such as, for example, France or Spain (Caltabiano et al. 2006). At the same time, parents tend to discourage non-normative behavior in their offspring, and even their adult children feel themselves to be under great pressure when making their own choices (Dalla Zuanna and Micheli 2004; Rosina and Fraboni 2007; Vignoli and Salvini 2014; Guetto et al. 2016).

In addition, Italy represents a late-comer in Second Demographic Transition (SDT)-related behaviors such as divorce, cohabitation, and childbearing within cohabitation. At the end of the 1970s, later than most other Western European countries, early traces of the SDT started to become visible in Italy. These changes intensified in the 1990s and accelerated still more in the first decade of the twenty-first century (Castiglioni and Dalla Zuanna 2009). Although the incidence of new family behaviors remains less evident in Italy than in other Western European countries, marriage dissolution is now common, and the share of cohabiting couples and childbearing within cohabitation has reached surprisingly high levels (Pirani and Vignoli 2016; Caltabiano et al. 2019).

Over the last decades, the sexual revolution has also taken place in Italy. Especially in the northern part of the country (Billari and Ongaro 2004; Caltabiano, Dalla Zuanna, and Rosina 2006; Billari, Catalbiano, and Dalla Zuanna 2007; Dalla Zuanna et al. 2019), sexuality has become increasingly disconnected from reproduction, with sexual pleasure gaining central relevance in the lives of both couples and single people (Barbagli et al. 2010). This new state of affairs has been accompanied by a convergence between men's and women's median ages at first sexual intercourse. The latter

changed very little for men, decreasing from 18.5 to 17.5 for those born in the 1940s and 1980s, respectively. For women, the median age of first sexual intercourse was 22 for those born in the 1910s, 20 for those born in the 1950s, and 18.5 for those born in the 1980s (Billari and Borgoni 2002; Barbagli, Dalla Zuanna, and Garelli 2010). Despite these changes, however, teenage childbirths and the rates of unintended pregnancies remained extremely low in Italy, suggesting that sexual decisions are carefully meditated and managed among individuals. In this vein, it is worth recalling that the tremendous decline of Italian fertility from the 1970s to the end of the past century happened without a parallel diffusion of modern contraception; it was, instead, mainly the result of private couples' decisions to limit their fertility using natural contraceptive methods (Dalla-Zuanna, De Rose, and Racioppi 2005).

In light of this background, we ask whether the literature's common finding of a delayed sexual intercourse for children of higher-status parents is confirmed also in the Italian context. Dalla Zuanna and Mancin (2004) did observe a strong connection between age at first intercourse and social control, consistent with the North American literature: when pressure from family, school and religion abates, sexual intercourse proceeds much faster. However, the parental control mechanism should be of lower importance compared to the US or other Anglo-Saxon countries, considering the much lower rates of teenage pregnancies, and that delayed sexual debut has strong normative status. The results of one of the few comparative works on the link between socioeconomic characteristics and adolescent women's sexual and reproductive behavior are suggestive in this respect: In France, where both the share of disadvantaged adolescents and teenage childbirths are lower, socioeconomic disadvantage has been found to be less associated to teenage pregnancy and early sexual debut compared to the UK and the US (Singh, Darroch, and Frost 2001). In the Italian setting, the cultural openness mechanism may even gain the upper hand, which may translate into an overall accelerating effect of parental SES on the timing of children's sexual debut, in contrast with most published literature. Thus, our hypotheses are that *higher parental education and social class are associated with earlier sexual debut* (**H1**), and that *such effects are stronger in the case of first protected intercourse* (**H2**).

In the next sections we test our hypotheses with a sample of Italian university students. Based on ISTAT data, only about 25% of those who attend vocational upper-secondary tracks (*istituti professionali*) subsequently enroll at a university, compared to more than 90% of those who attend the most prestigious academic tracks (*liceo classico* and *liceo scientifico*). Considering that the choice of a upper-secondary school in Italy is strongly stratified based on parental education and social class (Panichella and Triventi 2014; Guetto and Vergolini 2017), the sample we use consists of socioeconomically selected and better-off individuals. We will take this into account when interpreting our results.

## 2. Data and methods

The SELFY dataset is based on a survey carried out in the first half of 2017 in 28 Italian universities with the aim of drawing an updated picture of sexual and affective opinions and behavior among Italian university students. It was almost identical to a survey carried out 17 years before. All participants were attending Italian undergraduate courses in economics and statistics. Self-completed questionnaires were filled in during a one-hour lesson of a compulsory course under the discreet surveillance of both the teacher and a researcher, who presented the survey and was ready to answer any questions. Students were reassured about anonymity and the use of the data: after completion,

the questionnaires were sealed in an envelope and all the envelopes were mailed to the directors of the survey for data entry. This process resulted in a practical nonexistence of refusals to fill out the questionnaire in class, in both 2000 and 2017. Importantly, interviewing students in their first year of undergraduate studies minimizes the selectivity of future eventual dropouts. The survey was realized with 12,604 cases. For both 2000 and 2017, the data were post-stratified at the macro-regional level to obtain representative results at the national level (Billari, Caltabiano, and Dalla-Zuanna; Dalla Zuanna et al. 2019).

We study the timing and type of sexual debut of Italian university students with event-history techniques. The median age at first sexual intercourse decreased, over the period 2000-2017, by one year for young men (from 18.9 to 17.9) and 1.2 years for young women (from 19.2 to 18.0). Hence, the SELFY data, notwithstanding their selectivity, recover the above-mentioned closing of the gender gap in the age at first sexual intercourse. This closing of the gap is essentially due to a rapid change in young women's sexual behavior in the south of the country. In some regions of the center-north, in fact, male and female students were already having sex at similar ages at the beginning of the 21st century.

The analysis is divided into two steps. In the first step, the baseline duration is the time elapsed since the age of 13 to the first sexual intercourse; the remaining observations are right-censored at the time of the interview (respondents are from 18 to 26 years old when interviewed). In the second step, the baseline duration is the time elapsed from the age of 13 to the type of first sexual intercourse, protected with condom, protected with other contraceptives (birth control pill or intrauterine device, IUD) or unprotected (nothing, not fecundity period, coitus interrupted), whichever came first. We considered the three transitions as distinct processes or competing risks, i.e., the occurrence of one event removed the individual from the possibility of experiencing the other. We censored the remaining observations at the time of the interview.

After preliminary data cleaning, our analytical sample for the models consisted of 10,255 observations. We eliminated: 81 cases who experienced the first sexual intercourse before turning 13; 283 records because the date of the event was missing; 153 because the type of first sexual intercourse was missing; 82 foreign students because information about their migratory background was missing; 1,748 because of missing information uniformly distributed throughout the independent variables; the remaining two cases were eliminated because of deliberately fatuous answers.

Parental SES has been operationalized through a set of variables referring to the time when the child was aged 13. Parental education classifies the children according to the highest educational level achieved by the parents. The levels are: 0 = "up to lower-secondary" (no title, elementary school and lower-secondary school); 1 = "upper-secondary" (upper-secondary courses lasting from 2 to 5 years); 2 = "tertiary" (higher education). As a measure of parental social class, we use a three-category variable similar to the EGP class scheme (Erikson et al. 1979), based on information concerning the father's job: 0 = "low" (unskilled manual worker, lower-grade routine non-manual employee, lower-grade military officer); 1 = "medium" (skilled manual worker, higher-grade routine non-manual employee, teacher, self-employed with or without employees); 2 = "high" (entrepreneur, manager, professional with or without employees, higher-grade military officer); 3 = "did not work."

All models include a common set of control variables. They are: the area of residence during adolescence (0 = "Centre", including Sardinia; 1 = "North-East"; 2 = "North-West"; 3 = "South", including Sicily); gender (0 = "male", 1 = "female"); and the year of survey (0 = "2000"; 1 = "2017").[1]

Following a step-wise modelling strategy, models include additional control and intervenient variables. A first set of variables consists of other, "SDT-related" characteristics of the family of origin, that is, whether children experienced parental divorce, have been raised by a working mother, and the level of parents' religiosity. These variables are not, stricto sensu, *control* variables, because they are likely influenced by parental SES. However, we included them to estimate a more conservative effect of parental SES, given that family of origin characteristics tend to be strongly intertwined. Moreover, variables related to the family arrangement and parental values are often included in studies on children's sexual debut. Parental divorce (time-varying) is a dichotomous variable (0 = "parents never broke up or broke up after the first sexual intercourse"; 1 = "parents broke up before the first sexual intercourse"). The variable does not only consider legal separations and divorces, but also dissolutions of cohabitations and de facto separations of parents who remained formally married. Given the historically low level of women's labor force participation in Italy, for mothers we did not look at the type of occupation, but rather at whether she was employed (0 = "not employed"; 1 = "employed"). As a measure of parental religiosity, models include the level of church attendance of the family of origin (0 = "none of the parents regularly attended the Mass"; 1 = "at least one parent regularly attended the mass"). The two latter variables are measured retrospectively and refer to the time when the child was aged 13.

We then considered two sets of additional children's and parents' characteristics that may act as intervenient variables, in line with the literature discussed in the previous section: a) children's school career at the secondary level; b) parenting practices measured through indicators of the quality of parent-child relationship and communication about sex, and parental permissiveness.

As far as students' school career, we included two time-constant variables. The first variable is the grade obtained at the final exam of lower-secondary school (from 6 to 10). The second one is the type of school in which students obtained their upper-secondary diploma: the most prestigious academic tracks (0 = "classical and scientific lycei"); other lycei focusing on teaching-training, foreign languages, arts, and music (1 = "other general tracks"); technical institutes (2 = "accounting schools"), which is the most prevalent choice for undergraduates in economics and statistics; 3 = "other technical institutes"; and vocational courses (4 = "professional institutes").

As regards parenting practices, the quality of parent-child relationship and communication about sex have been measured through two retrospective variables referring to the time when the child was aged between 14 and 18: whether the child reports to have had a good relation with at least one parent (0 = "distant or no relationship with both parents"; 1 = "good relationship with at least one parent"), and an additive index of communication about sex based on three highly correlated indicators of the level of parent-child dialogue concerning sexual development, sexually transmitted diseases, and contraceptive use (0 = "never"; 1 = "superficially"; 2 = "in-depth"). Variables have been summed up

[1] We also included in the model equation whether the respondent was in a relationship at the time of the first sexual intercourse. The variable did not exert statistically and substantially significant effects; it was thus omitted from the final model specification.

and divided by three. Finally, we considered two retrospective variables referring to the time when the child was aged between 16 and 18: whether parents allowed the respondent to have moments of intimacy with his/her partner at home (0 = "never"; 1 = "sometimes"; 2 = "often"; 3 = "very often"), and an index of parental permissiveness based on three highly correlated indicators about children's freedom to return home late for meals, on Saturday night, and on all other nights (0 = "never"; 1 = "sometimes"; 2 = "often"; 3 = "very often"). Even in this case, variables have been summed up and divided by three.

The distribution of person-months (exposures) and events according to all categorical variables considered are reported in the Appendix. A piece-wise constant exponential model with interactions between the variables relating to parental SES and the baseline duration suggested a non-proportional effect of the covariates (results not shown, but available upon request). In addition, the shape of the hazard function suggests the appropriateness of a log-logistic or a log-normal model specification (Figure 1). For these reasons, we opted for a log-logistic specification of our event-history models, using the Accelerated Failure Time parameterization, as it proved superior on the basis of AIC and BIC criteria.

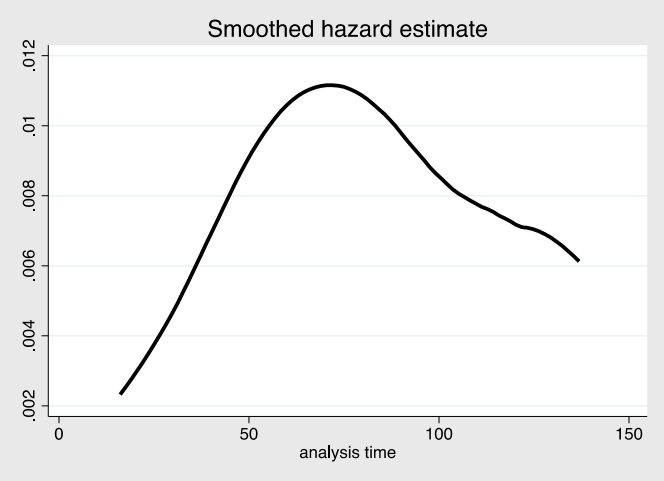


**Figure 1**: Shape of the hazard function for the transition to first sexual intercourse

## 3. Results

### *3.1 Social origins and the timing of sexual debut*

Table 1 reports results from step-wise multivariate models (Table 1). Model 1 includes a set of control variables common to all models. Compared to Central Italy, we notice a delay in the occurrence of the event in the other areas, especially in the North-East. The year of survey underlines changes in the behaviors: currently, the first sexual intercourse occurs sooner and more frequently. Differences between males and females were greater in the year 2000, when female students experienced a lower risk of sexual debut. In fact, the interaction coefficient between gender and time shows how those same differences turned non-significantly different in 2017.

Model 1 only includes the level of parental education as the independent variable of interest. Consistent with our hypothesis H1, the higher the level of parental education, the lower the survival time (and, thus, the higher the hazard of sexual debut). In Model 2, the father's class is added, the

effects of which are also consistent with hypothesis H1: the higher the father's class, the higher the hazard of first sexual intercourse. The father's class accounts for a substantial part of the effect of parental education, and especially the effect of having a highly educated parent, so that it emerges as the strongest predictor.

Model 3 includes the SDT-related characteristics of the family of origin as additional control variables. The effects of those characteristics confirm expectations based on prior studies: children experiencing parental break-up or raised by a working mother or "secular" parents should experience an earlier sexual debut. Surprisingly, the effects of parental SES are only slightly affected: the effect of the father's social class remains virtually unaltered, whereas that of parental education is slightly reduced, especially the effect of having a highly educated parent. Hence, the accelerating effect of higher SES on the timing of sexual debut is not confounded by SDT markers.

**Table 1**: Log-logistic event-history models for the analysis of the transition to first sexual intercourse

| | M1 | M2 | M3 | M4 | M5 |
|---|---|---|---|---|---|
| **Area (Centre)** | | | | | |
| North - East | 0.103*** (0.0185) | 0.103*** (0.0184) | 0.0901*** (0.0184) | 0.0913*** (0.0183) | 0.106*** (0.0176) |
| North - West | 0.0312* (0.0182) | 0.0307* (0.0181) | 0.0216 (0.0180) | 0.0270 (0.0180) | 0.0390** (0.0173) |
| South | 0.0352** (0.0151) | 0.0328** (0.0151) | 0.00785 (0.0152) | 0.00257 (0.0152) | -0.0353** (0.0147) |
| **Survey (2000)** | | | | | |
| 2017 | -0.203*** (0.0187) | -0.209*** (0.0187) | -0.190*** (0.0187) | -0.191*** (0.0187) | -0.167*** (0.0182) |
| **Gender (Male)** | | | | | |
| Female | 0.0644*** (0.0198) | 0.0577*** (0.0198) | 0.0563*** (0.0196) | 0.0498** (0.0198) | -0.0243 (0.0193) |
| **Survey # Gender** | | | | | |
| 2017 # Female | -0.0584** (0.0249) | -0.0546** (0.0248) | -0.0672*** (0.0247) | -0.0678*** (0.0247) | -0.0643*** (0.0238) |
| **Parental education (Up to low-sec)** | | | | | |
| Upper-secondary | -0.0792*** (0.0160) | -0.0627*** (0.0161) | -0.0516*** (0.0162) | -0.0567*** (0.0162) | -0.0308** (0.0156) |
| Tertiary | -0.0840*** (0.0180) | -0.0361* (0.0192) | -0.0156 (0.0194) | -0.0261 (0.0198) | 0.00982 (0.0187) |
| **Father's social class (Low)** | | | | | |
| Medium | | -0.0335** (0.0161) | -0.0317** (0.0160) | -0.0326** (0.0159) | -0.0213 (0.0154) |
| High | | -0.118*** (0.0183) | -0.120*** (0.0182) | -0.123*** (0.0183) | -0.0939*** (0.0175) |
| Does not work | | -0.0225 (0.0807) | -0.0170 (0.0806) | -0.0168 (0.0804) | -0.0276 (0.0767) |
| **Working mother (No)** | | | | | |
| Yes | | | -0.0997*** (0.0132) | -0.0997*** (0.0131) | -0.0788*** (0.0127) |
| **Parental divorce (No)** | | | | | |
| Yes | | | -0.0598** (0.0247) | -0.0535** (0.0247) | -0.0123 (0.0238) |
| **Parental church attendance (No)** | | | | | |
| At least one parent | | | 0.117*** (0.0133) | 0.112*** (0.0133) | 0.0853*** (0.0128) |
| **Low-sec school grade** | | | | 0.0229*** (0.00613) | |
| **Type of high school (Classical-Scientific)** | | | | | |
| Accounting | | | | 0.0109 (0.0145) | |
| Other technical institutes | | | | -0.0743*** (0.0230) | |
| Other Lyceum | | | | -0.0351 (0.0266) | |
| Professional institutes | | | | -0.0929** (0.0390) | |
| **Good relation with at least one parent (No)** | | | | | |
| Yes | | | | | 0.0882*** (0.0214) |
| **Index of dialogue about sex issues with parents** | | | | | -0.0449*** (0.00948) |
| **Moments of intimacy at home (Never)** | | | | | |
| Sometimes | | | | | -0.283*** (0.0155) |
| Often | | | | | -0.335*** (0.0212) |
| Very often | | | | | -0.441*** (0.0288) |
| **Index of parental permissiveness** | | | | | -0.0656*** (0.00990) |
| **Constant** | 4.291*** (0.0218) | 4.329*** (0.0243) | 4.361*** (0.0254) | 4.192*** (0.0569) | 4.593*** (0.0387) |
| **Observations** | 10255 | 10255 | 10255 | 10255 | 10255 |
| **N. events** | 7586 | 7586 | 7586 | 7586 | 7586 |

**p < 0.1, ** p < 0.05, *** p < 0.01. Standard errors in parentheses.*

To provide a more substantive interpretation of the results, Figure 2 shows predicted survival curves at different combinations of the social background variables (with all other covariates set at their mean value). Panel a) shows predictions for children with low and high parental SES, where low parental SES is defined as having a lower class father and parents with up to lower-secondary education, whereas high parental SES is defined as having a higher class father and parents with upper-secondary education (to account for the non-linear effect of parental education). "Traditional" families are defined as male-breadwinner, intact families in which at least one parent attended church, while "SDT-friendly" families identify the opposite scenario. The median duration to first sexual intercourse is substantially longer for children raised by parents with low SES (panel a) and by more "traditional" families (panel b). More specifically, the difference in the median durations between children with lower and higher parental SES is approximately 11 months (69 months for the low- and 58 for the high-SES parents, starting from the 13$^{th}$ birthday). The effect of SDT-related characteristics is stronger, as the median duration for children of "traditional" families is 74 months, and for those belonging to "SDT-friendly" families, 56 months.

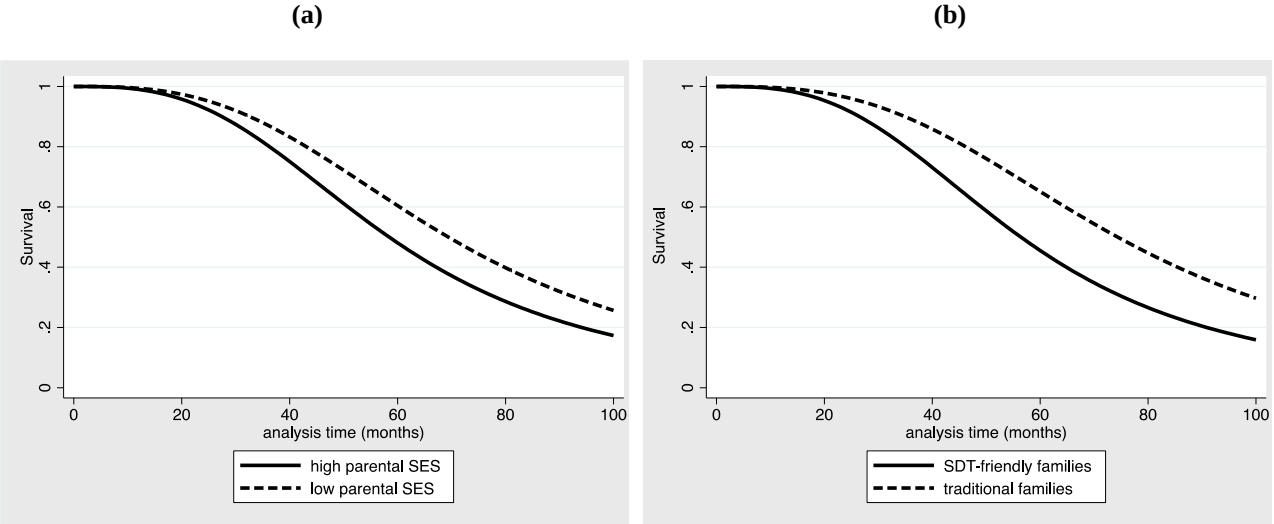


**Figure 2**: Predicted survival curves (based on Model 3 in Table 1) for students raised in families with high vs. low parental SES (panel a) and raised in "SDT-friendly" vs. "traditional" families (panel b). Predictions refer to the first 100 months of observations when most of the events occur.

### *3.2 Understanding the mechanisms*

To better grasp the mechanisms underlying the effects of parental SES, in Model 4 we include students' school performances in lower-secondary schools and the type of upper-secondary school attended as potential intervenient variables. Results show that there is a positive relation between the "quality" of students' school career and the duration to first sexual intercourse, in line with existing evidence concerning Anglo-Saxon countries: better grades in the final exam of lower-secondary school and enrolment in more prestigious tracks are associated to a delayed first sexual intercourse. Given that higher parental SES is associated with better children's school performances and more ambitious choices regarding the type of upper-secondary school, especially in Italy (Contini and Scagni 2011; Guetto and Vergolini 2017), we could expect the direct effect of parental SES to actually increase with the inclusion of those variables. However, this happened to only a very modest extent. This is most likely due to the selectivity of our sample of university students. That is, children of low-

status parents are unlikely to enroll in college in Italy, and especially in the faculties of economics and statistics. Thus, the few who do so tend to be selected in terms of better school performances and school choices at previous educational levels (Cameron and Heckman 1998).

Parenting practices are expected to play a more relevant role in accounting for parental SES effects. Even in this case, all variables are associated with the timing of first sexual intercourse in line with most of the empirical evidence available in the literature. As Model 5 shows, having had a good relationship with (at least one of) the parents is associated with a delay of first sexual intercourse. On the contrary, having had dialogue about sexual issues is associated with a higher risk of sexual debut. The effect of this variable cannot be easily interpreted in causal terms, however. Parents' propensity to discuss contraceptive methods, for instance, is very likely endogenous to their children's sexual activity and risk of first intercourse. The same holds as far as parents' propensity to allow their children moments of intimacy at home with their partners, which has been found to increase the risk of first sexual intercourse too. Finally, parental permissiveness in terms of returning home late is associated with an accelerated transition to first sexual intercourse. The inclusion of these variables does account for part of the effects of parental SES. For instance, the coefficients associated with having a high- or middle-class father, rather than a low-class one, are reduced by 22% and 33%, respectively, and the latter lost its statistical significance. Additional analyses reveal that high-class fathers are more open to allowing their children moments of intimacy at home, as well as later curfews. As far as the effect of having an upper-secondary educated parent, we observe a 46% reduction. That being said, most parental SES effects remain direct, i.e., could not be grasped by the mediators. It should be noticed that the accelerating effect of parental divorce, instead, turns to zero after controlling for parenting practices.[2]

*3.3 Social origins and the type of first sexual intercourse*

The results of competing risks models are shown in Table 2. Model 6 shows coefficients from a model identical to Model 3 in Table 1, with the only inclusion being a variable for the type of first intercourse. The latter has a strong effect on the time of the event: intercourse protected with condoms happens much sooner and more frequently than intercourse using other methods, with unprotected types in an intermediate position. This corroborates the view that although sexuality is changing and becoming more precocious in Italy, it still remains carefully managed.

Model 7 adds interactions between the type of intercourse and both parental education and the father's social class. Consistently with our hypothesis H2 stating that parental SES may have a positive effect, especially on the risk of first protected intercourse, a higher level of education of the family of origin accelerates the timing to first intercourse only if the latter is protected with a condom, whereas it protects children from the risk of first unprotected intercourse. Although birth control pills and IUDs only protect from the risks of unintended pregnancy and not from sexually transmitted diseases, the effect of parental education does not differ between "other" types of protection and condom use. However, the former are rarer and related to later sexual debuts in our sample. The effect of the father's social class does not seem to be moderated by the type of sexual debut, however. This

[2] We checked that the effects of parental SES go in the same direction for both males and females, and the same holds for all the intervenient variables considered in Models 4 and 5. We did not implement separate models by sex, however, because this would result in a too small number of cases with certain characteristics (e.g., experience of parental break-up), which would be especially problematic for the analyses which distinguish between different types of sexual debut.

evidence contradicts our hypothesis H2, especially because social class effects on the timing of first sexual intercourse are stronger than those of parental education.

In Model 8 we test whether the interaction effect between parental education and the type of first intercourse holds with the inclusion of interactions between type of first intercourse and the other control variables related to the family of origin: results remain almost unchanged. Among the controls, only the accelerating effect of having been raised by a working mother seems to be stronger if the first sexual intercourse was protected with condom.

**Table 2**: Log-logistic competing-risks models for the analysis of the transition to first sexual intercourse

| | M6 | M7 | M8 |
|---|---|---|---|
| **Type (Condom)** | | | |
| Unprotected | 0.566*** (0.0137) | 0.482*** (0.0372) | 0.458*** (0.0402) |
| Other | 1.064*** (0.0211) | 1.055*** (0.0583) | 1.039*** (0.0627) |
| **Area (Centre)** | | | |
| North - East | 0.0929*** (0.0176) | 0.0928*** (0.0176) | 0.0929*** (0.0176) |
| North - West | 0.00998 (0.0173) | 0.00982 (0.0173) | 0.00961 (0.0173) |
| South | 0.0123 (0.0145) | 0.0126 (0.0145) | 0.0127 (0.0145) |
| **Survey (2000)** | | | |
| 2017 | -0.185*** (0.0180) | -0.185*** (0.0180) | -0.185*** (0.0180) |
| **Gender (Male)** | | | |
| Female | 0.0453** (0.0192) | 0.0459** (0.0192) | 0.0458** (0.0192) |
| **Survey # Gender** | | | |
| 2017 # Female | -0.0575** (0.0238) | -0.0580** (0.0238) | -0.0583** (0.0238) |
| **Parental education (Up to low-sec)** | | | |
| Upper-secondary | -0.0516*** (0.0156) | -0.0831*** (0.0196) | -0.0808*** (0.0197) |
| Tertiary | -0.0120 (0.0188) | -0.0575** (0.0233) | -0.0534** (0.0235) |
| **Father's social class (Low)** | | | |
| Medium | -0.0297* (0.0153) | -0.0266 (0.0193) | -0.0255 (0.0193) |
| High | -0.120*** (0.0174) | -0.112*** (0.0220) | -0.112*** (0.0220) |
| Does not work | -0.0347 (0.0780) | 0.00865 (0.0986) | 0.00816 (0.0986) |
| **Working mother (No)** | | | |
| Yes | -0.0958*** (0.0127) | -0.0957*** (0.0127) | -0.114*** (0.0159) |
| **Parental divorce (No)** | | | |
| Yes | -0.0568** (0.0233) | -0.0565** (0.0233) | -0.0332 (0.0297) |
| **Parental church attendance (No)** | | | |
| At least one parent | 0.115*** (0.0128) | 0.115*** (0.0128) | 0.114*** (0.0161) |
| **Type # Parental educ (Unprotected # Low-sec)** | | | |
| Unprotected # Upp-sec | | 0.111*** (0.0340) | 0.104*** (0.0344) |
| Unprotected # Tertiary | | 0.159*** (0.0410) | 0.146*** (0.0420) |
| **Type # Parental educ (Other # Low-sec)** | | | |
| Other # Upp-sec | | -0.00188 (0.0534) | -0.00496 (0.0541) |
| Other # Tertiary | | 0.0140 (0.0626) | 0.00777 (0.0641) |
| **Type # Father's social class (Unprotected # Low)** | | | |
| Unprotected # Medium | | -0.0188 (0.0350) | -0.0217 (0.0350) |
| Unprotected # High | | -0.0271 (0.0400) | -0.0262 (0.0400) |
| Unprotected # Does not work | | -0.0785 (0.179) | -0.0764 (0.179) |
| **Type # Father's social class (Other # Low)** | | | |
| Other # Medium | | 0.0216 (0.0522) | 0.0194 (0.0522) |
| Other # High | | -0.00717 (0.0584) | -0.00667 (0.0584) |
| Other # Does not work | | -0.199 (0.233) | -0.195 (0.233) |
| **Type # Working mother (Unprotected # No)** | | | |
| Unprotected # Yes | | | 0.0548* (0.0285) |
| **Type # Working mother (Other # No)** | | | |
| Other # Yes | | | 0.0279 (0.0429) |
| **Type # Parental divorce (Unprotected # No)** | | | |
| Unprotected # Yes | | | -0.0591 (0.0529) |
| **Type # Parental divorce (Other # No)** | | | |
| Other # Yes | | | -0.0625 (0.0741) |
| **Type # Parental church (Unprotected # No)** | | | |
| Unprotected # At least one | | | -0.00205 (0.0293) |
| **Type # Parental church (Other # No)** | | | |
| Other # At least one | | | 0.0212 (0.0445) |
| **Constant** | 4.532*** (0.0250) | 4.557*** (0.0277) | 4.566*** (0.0282) |
| **Observations** | 10255 | 10255 | 10255 |
| **Events** | 7586 | 7586 | 7586 |

**p < 0.1, ** p < 0.05, *** p < 0.01. Standard Errors in parentheses.*

Based on Model 2, survival curves have been predicted to provide a substantive interpretation of the results. Figures 3 shows predicted survivals for combinations of parental education and type of first sexual intercourse, holding the father's social class to "medium." Regarding unprotected first sexual intercourse, the predicted 75$^{th}$ percentile duration to the event is approximately nine months longer for children of highly-educated parents, compared with children of the least educated parents. Regarding protected first sexual intercourse, the median duration is, instead, approximately seven

months longer for children of less educated parents, compared with children of upper-secondary educated parents.

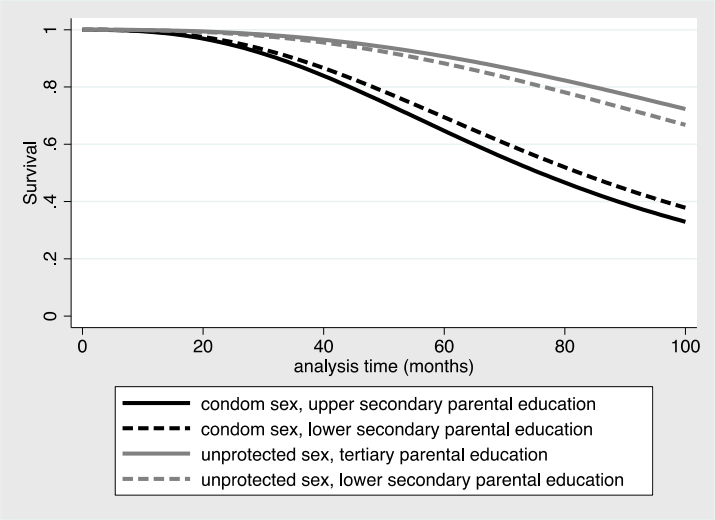


**Figure 3**: Predicted survival curves by parental education and type (protected with condom vs unprotected) of first sexual intercourse. Predictions refer to the first 100 months of observations when most of the events occur.

## 4. Conclusions

In this paper we analyzed how university students' timing and type of sexual debut are influenced by parental SES. We did so by accounting for other characteristics of the family of origin more related to the SDT narrative, such as the presence of a working mother, the level of parents' religiosity, and the experience of parental break-up. The literature, which has mainly focused on the US or Anglo-Saxon European contexts, has thus far offered a clear-cut finding: Children of high-status parents tend to postpone their sexual debut. The standard explanation underlying this robust evidence is a "parental control" mechanism, that is, high-SES parents would exert more effective behavioral monitoring and control, leading to a postponed sexual debut of their children. High-SES parents are well aware of the risks associated with an early sexual debut, including unintended pregnancies which may put their children's school and labor market careers at risk.

We added, however, that from a theoretical point of view, an opposite mechanism can be hypothesized. If high-SES parents hold more liberal attitudes toward sexuality and family, this may translate into more permissiveness toward their children's sexual experiences, but also better communication about sex and its risks. Thus, children of high-SES parents may even be more precocious than their low-SES counterparts, at least when it comes to first *protected* sexual intercourse. Depending on whether the "parental control" or "cultural openness" mechanism prevails, one could find a postponing or an anticipating effect of higher parental SES on children's timing of sexual debut.

Which of the two mechanisms prevail, we argued, is likely to depend on the social context. In this paper, we analyzed the role of the family of origin in shaping children's sexual debut in Italy. Italy has been characterized by a relatively slow and delayed transition to adulthood compared to other high-income, developed countries (Billari and Rosina 2004). In contrast to the US and other Anglo-Saxon contexts, teenage childbirths are extremely rare in Italy, and later sexual debut has a normative

status (Barbagli, Dalla Zuanna, and Garelli 2010). Also, the role of parental normative pressures on children's decisions concerning family and sexual life is likely to be more important in Italy due to the strength of family ties and obligations (Vignoli and Salvini 2014; Guetto et al. 2016). Hence, we argued that the "cultural openness" mechanism may gain the upper hand over the "parental control" mechanism there, so that higher parental SES could accelerate the timing of first sexual intercourse, especially if protected with a condom.

Using data from the two releases of the Sexual and Emotional Life of Youths survey (2000, 2017), we found empirical support for our hypothesis, as higher parental education and, especially, social class were found to exert a positive effect on children's risk of first sexual intercourse. These results hold also controlling for other characteristics of the family of origin, whose effects are in line with the literature: children with divorced parents, raised by a working mother, and "secular" parents experience an earlier sexual debut.

To gain a deeper understanding of the role of parental SES in Italy, we followed a twofold strategy: first, we included potentially mediating factors in the models; second, we distinguished between protected and unprotected first sexual intercourse in a competing-risk setting. Among the potentially mediating factors, previous school choices and grades at the secondary level, although being significantly associated with the risk of first intercourse, did not play any substantial role. Parenting practices, operationalized through indicators of parent-child relationship quality and dialogue about sexual issues, and parental permissiveness were all found to be associated to the risk of sexual debut and were able to account for at least part of the effects of parental education and the father's social class. These results are consistent with the argument that higher-SES and more "SDT-friendly" family environments tend to be more open toward their children's sexuality. The competing risks analysis provided additional evidence in this regard. Parental education has been found to only increase children's risks of first protected sexual intercourse, whereas the effect on first unprotected intercourse is negative, which is consistent with the literature-based argument that higher parental SES favors a more effective monitoring of children's risky behavior. In a nutshell, the overall positive effect of parental education on children's risk of sexual debut is due to the limited diffusion of unprotected sexual relations during adolescence and young adulthood in the Italian setting compared to the North American one.

These results notwithstanding, our work is not without limitations. To be sure, although for stylistic purposes we used expressions such as "effect" or "influence," the present paper is of a largely descriptive nature. Second, our understanding of the mechanisms underlying the effects of parental SES remains limited. For instance, the father's social class came out as a more important predictor of children's timing of sexual debut compared with parental education, and a higher social class has been found to influence an earlier sexual debut irrespective, to a large extent, of parenting practices, and regardless of the type of first intercourse. A possible reason may be that, due to data constraints, our intervenient variables were of limited scope—e.g., we could not include any direct measures of parental attitudes and values—or were only imperfectly measured, as in the case of our proxy of parent-child relationship quality. Finally, although our work suggests how social origins influence the sexual debut of youths in Italy, our sample is not representative of the universe of Italian youths, which prevents us from a generalization of our findings. It is worth noting that international studies on youth sexuality often focus on specific sub-samples of the population, too. Hence, the comparison

of our findings with those of the prevalent Anglo-Saxon literature should not be hampered by sample selectivity.

The relationship between individuals' sexual experiences and the social structure surrounding them suggests that experiences at one stage of life will have consequences on subsequent stages of life (James-Hawkins 2019). A study of sexual debut is important in understanding not only sexual and affective behavior of youths, but also the transition to adulthood and the ensuing course of family life (Carpenter 2001; Manning, Giordano, and Longmore 2006, 2008). In this paper, we found a clear accelerating effect of higher parental SES on the sexual debut of their children in Italy. This result contradicts the well-established, but mainly North American- and Anglo-Saxon-driven, finding that children with higher parental SES postpone their sexual debut.

## Appendix

| | Person-months | Failures | Abs. rate | 95% CI | |
|---|---|---|---|---|---|
| **Area** | | | | | |
| Centre | 507294 | 2100 | 0.00413961 | 0.0039663 | 0.0043205 |
| North - East | 342858 | 1254 | 0.00365749 | 0.0034606 | 0.0038656 |
| North - West | 364029 | 1398 | 0.00384035 | 0.0036442 | 0.004047 |
| South | 728889 | 2834 | 0.00388811 | 0.0037476 | 0.0040339 |
| **Survey** | | | | | |
| 2000 | 838074 | 2633 | 0.00314173 | 0.003024 | 0.0032641 |
| 2017 | 1104996 | 4953 | 0.00448237 | 0.0043593 | 0.004609 |
| **Gender** | | | | | |
| Male | 905412 | 3738 | 0.00412851 | 0.0039983 | 0.004263 |
| Female | 1037658 | 3848 | 0.00370835 | 0.003593 | 0.0038274 |
| **Parental education** | | | | | |
| Up to low – sec | 431397 | 1439 | 0.00333567 | 0.0031677 | 0.0035126 |
| Upper – secondary | 992544 | 4011 | 0.00404113 | 0.003918 | 0.0041681 |
| Tertiary | 519129 | 2136 | 0.00411458 | 0.0039437 | 0.0042928 |
| **Father's social class** | | | | | |
| Low | 398157 | 1464 | 0.00367694 | 0.0034933 | 0.0038702 |
| Medium | 972291 | 3630 | 0.00373345 | 0.003614 | 0.0038569 |
| High | 562941 | 2450 | 0.00435214 | 0.0041832 | 0.0045279 |
| Doesn't work | 9681 | 42 | 0.00433839 | 0.0032062 | 0.0058705 |
| **Working mother** | | | | | |
| No | 685833 | 2341 | 0.00341337 | 0.0032779 | 0.0035545 |
| Yes | 1257237 | 5245 | 0.00417185 | 0.0040605 | 0.0042863 |
| **Parental church attendance** | | | | | |
| Never | 1344672 | 5565 | 0.00413856 | 0.0040312 | 0.0042487 |
| At least one parent | 598398 | 2021 | 0.00337735 | 0.0032333 | 0.0035279 |
| **Type of high school** | | | | | |
| Classical - Scientific lyceum | 1000959 | 3967 | 0.0039632 | 0.0038418 | 0.0040885 |
| Accounting | 636465 | 2279 | 0.00358072 | 0.0034367 | 0.0037308 |
| Other technical institutes | 151239 | 666 | 0.00440363 | 0.0040816 | 0.0047511 |
| Other Lyceum | 105672 | 467 | 0.00441934 | 0.0040362 | 0.0048389 |
| Professional institutes | 48735 | 207 | 0.00424746 | 0.0037065 | 0.0048673 |
| **Parental divorce** | | | | | |
| No | 1833360 | 7063 | 0.00385249 | 0.0037637 | 0.0039434 |
| Yes | 109710 | 523 | 0.00476711 | 0.0043756 | 0.0051937 |
| **Good relation with parents** | | | | | |
| No | 170661 | 633 | 0.00370911 | 0.0034311 | 0.0040096 |
| Yes | 1772409 | 6953 | 0.00392291 | 0.0038318 | 0.0040162 |
| **Moments of intimacy at home** | | | | | |
| No problem | 1457184 | 4768 | 0.00327206 | 0.0031805 | 0.0033663 |
| Sometimes | 288537 | 1573 | 0.00545164 | 0.0051888 | 0.0057278 |
| Often | 133005 | 805 | 0.0060524 | 0.0056484 | 0.0064853 |
| Very often | 64344 | 440 | 0.00683824 | 0.0062282 | 0.007508 |
| **Type of first sexual intercourse** | | | | | |
| Unprotected | 647690 | 1630 | 0.00251664 | 0.0023974 | 0.0026418 |
| Condom | 647690 | 5447 | 0.00840989 | 0.0081895 | 0.0086362 |
| Other | 647690 | 509 | 0.00078587 | 0.0007205 | 0.0008572 |

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